

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HULU, LLC,
Petitioner,

v.

SITO MOBILE R&D IP, LLC and SITO MOBILE, LTD.,
Patent Owner.

IPR2021-00265
Patent 9,591,360 B2

Before JONI Y. CHANG, THOMAS L. GIANNETTI, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

CHANG, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Hulu, LLC (“Petitioner”) filed a Petition requesting an *inter partes* review (“IPR”) of claims 15–19, 21, 24, and 27 (“the challenged claims”) of U.S. Patent No. 9,591,360 B2 (Ex. 1001, “the ’360 patent”). Paper 2 (“Pet.”), 1. SITO Mobile R&D IP, LLC and SITO Mobile Ltd. (collectively, “Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). On May 19, 2021, we instituted this *inter partes* review as to all of the challenged claims for all of the grounds of unpatentability asserted in the Petition. Paper 11 (“Dec.”).

Subsequent to institution, Patent Owner filed a Response (Paper 18, “PO Resp.”) and a Sur-reply (Paper 25, “Sur-reply”). Petitioner filed a Reply (Paper 23, “Reply”). An oral hearing was held on February 7, 2022, and a transcript has been entered into the record as Paper 30 (“Tr.”).

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons that follow, Petitioner has demonstrated by a preponderance of the evidence that claims 15–19, 21, 24, and 27 of the ’360 patent are unpatentable.

A. Related Matters

The parties indicate that the ’360 patent is involved in *SITO Mobile R&D IPI, LLC and SITO Mobile, Ltd. v. Hulu, LLC*, Case No. 6:20-cv-00472-ADA (W.D. Tex. 2020). Pet. 73; Paper 5, 1.

B. The '360 Patent

The '360 patent is titled “System and Method for Routing Media” and “is related to the fields of management and administration of media streaming.” Ex. 1001, code (54), 1:36–37. According to the '360 patent, the demand for digital media streaming services was increasing because digital media streaming can be used to create enhanced consumer and business services. *Id.* at 1:49–52. Figure 1 is reproduced below.

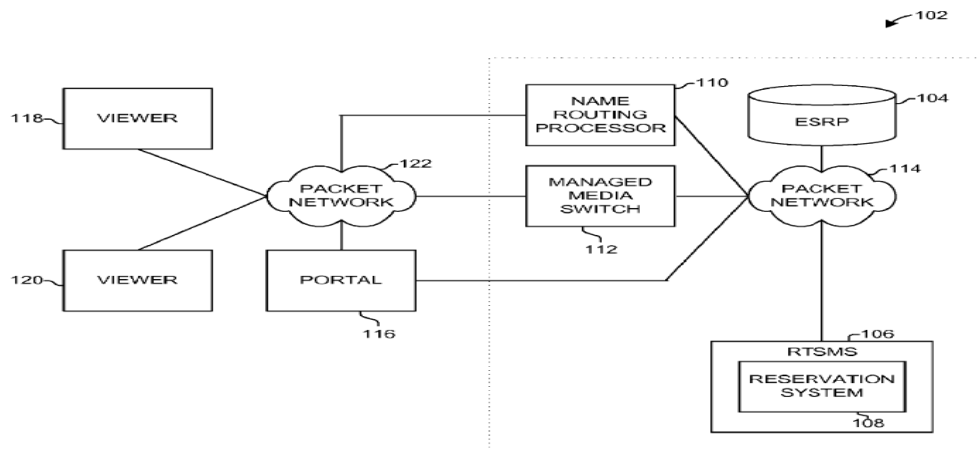


Figure 1 above depicts an exemplary embodiment of a streaming system. *Id.* at 6:6–7. Streaming system 102 comprises enhanced service routing processor (“ESRP”) 104, real time switch management system (“RTSMS”) 106, reservation system 108, name routing processor (“NRP”) 110, and managed media switch (“MMS”) 112, each of which communicates through packet network 114. *Id.* at 6:7–15. Portal 116 communicates with reservation system 108 of RTSMS 106 via packet network 114, and one or more viewers 118 and 120 may communicate with NRP 110, MMS 112, and/or portal 116 via packet network 122. *Id.* at 6:15–19.

C. Illustrative Claim

Of the challenged claims, claim 15 is independent. Claims 16–19, 21, 24, and 27 depend from claim 15. Claim 15 is illustrative:

15. A method performed by an apparatus having a processor, memory, and a packet-based network interface, the method comprising:

[15.a] receiving from a client device via a packet-based telecommunication network signaling to have video content streamed to the client device; and

[15.b] in response to the received signaling, generating an identifier uniquely associated with the client device and a viewing session for the video content and transmitting to the client device, via the packet-based telecommunication network and in one or more files, each of the one or more files being in a format compatible with a media player on the client device,

[15.b.1] (i) an indication of one or more segments of the video content,

[15.b.2] (ii) a URL including an identification of one or more resources of a content distribution network available to facilitate streaming of the one or more segments to the client device,

[15.b.3] (iii) information instructing the client device how to communicate with the one or more resources of the content distribution network to cause the plurality of segments to be streamed to the client device by the content distribution network,

[15.b.4] (iv) information instructing the client device how to communicate with an advertising server to cause one or more advertisements to be streamed from the advertising server to the client device in sequence with the streaming of the plurality of segments to the client device by the content distribution network, and

[15.b.5] (v) the identifier.

Ex. 1001, 54:1–28 (bracketed matters and line breaks added).

D. Prior Art and Other Evidence

Petitioner relies upon the references listed below (Pet. 10):

Name	Reference	Date	Exhibit No.
Eyal	U.S. Patent No. 6,389,467 B1	May 14, 2002	1005
Wiser	U.S. Patent No. 6,385,596 B1	May 7, 2002	1006
Madison	U.S. Patent Pub. No. 2004/0083273A1	Apr. 29, 2004	1051

Petitioner also relies on the Declaration of Henry Houh, Ph.D. Ex. 1003.

E. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 10)¹:

Claims Challenged	35 U.S.C. §	References
15–19, 21, 24, 27	103(a)	Eyal, Wiser
15, 16, 19, 21, 27	103(a)	Madison, Wiser

¹ For purposes of this Decision, we assume the claims at issue have an effective filing date prior to March 16, 2013, the effective date of the relevant amendments to the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), and we apply the pre-AIA version of 35 U.S.C. § 103.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, we construe a patent claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b).” 37 C.F.R. § 42.100(b) (2019). Under this standard, the words of a claim generally are given their “ordinary and customary meaning,” which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

In light of the parties’ arguments and supporting evidence in this entire trial record, we find that it is necessary to address only the claim term identified below. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

“reservation” and “reservation identification”

Claim 16 recites “the identifier is a reservation identification.” Ex. 1001, 54:29–30. Petitioner asserts that the term “reservation” should be construed as “a set of instructions uniquely identifying the communication device and the play script, and reserving system resources for streaming the requested media,” and the term “reservation identification” should be

construed as “a designator uniquely identifying a reservation.” Pet. 20–22. We adopted Petitioner’s constructions in the Institution Decision for purposes of institution. Dec. 18–19.

After institution, Patent Owner proposes to construe “reservation” as an “arrangement regarding reserved resources of a streaming system,” citing the Specification (Ex. 1001, 11:59–62) and Mr. Adam’s testimony (Ex. 2012 ¶ 91) for support. PO Resp. 16–17. Patent Owner also proposes to construe “reservation identification” as “identification of a reservation.” *Id.* Mr. Adam’s testimony also relies on the Specification for support. Ex. 2012 ¶¶ 77, 91 (citing Ex. 1001, 11:59–62).

The Specification sets forth the following definition: “[a] reservation is a feature that enables the streaming system 102 to reserve system resources, such as *switches, processors, or media*, either now or in the future, to ensure a quality media experience.” Ex. 1001, 11:59–62 (emphasis added). The Federal Circuit has recognized that “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess,” and “[i]n such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316 (citing *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). Therefore, consistent with the definition in the Specification, we construe “reservation” as “a feature that enables the streaming system . . . to reserve system resources, such as switches, processors, or media, either now or in the future, to ensure a quality media experience.” Ex. 1001, 11:59–62. We agree with Patent Owner that the construction of the term “reservation” does

not require “a set of instructions uniquely identifying the communication device.” As to “reservation identification,” we adopt Patent Owner’s construction, construing the term “reservation identification” as “identification of a reservation” because this construction is consistent with the term’s plain and ordinary meaning, without requiring the identification to be unique.

B. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, “would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of non-obviousness.² *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

² Neither party presents evidence or arguments regarding objective evidence of non-obviousness in this proceeding.

C. Level of Ordinary Skill in the Art

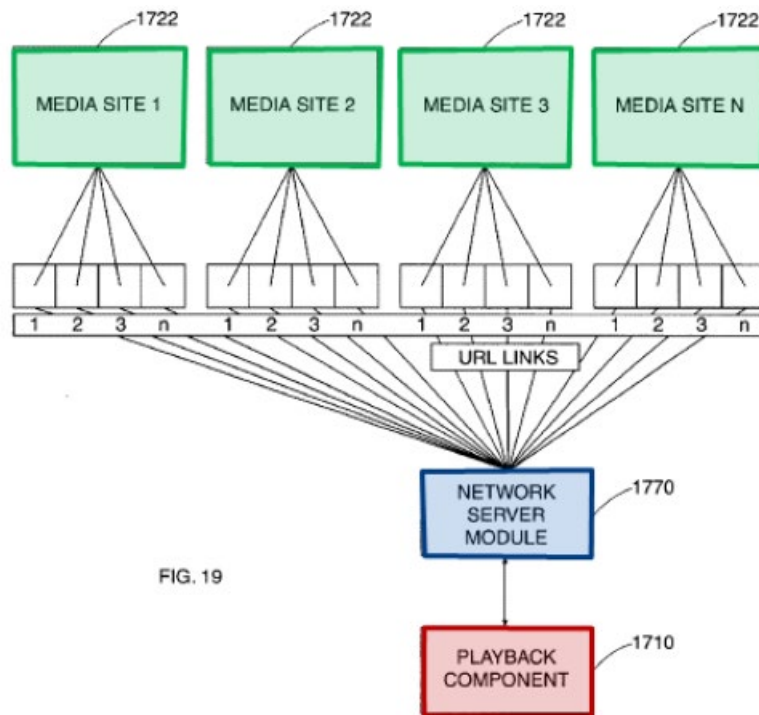
In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (quotation marks omitted).

Here, Petitioner asserts that a person of ordinary skill in the art of the ’360 patent would have had “at least a bachelor’s degree in computer science, electrical or computer engineering, or equivalent.” Pet. 16. And, such an artisan also would have had “at least two years of experience in distributed systems, multimedia streaming, and various HTTP-related technologies, or an equivalent amount of relevant work or research experience,” citing to the Declaration of Henry Houh, Ph.D., for support. *Id.* (citing Ex. 1003 ¶¶ 59–61). Patent Owner’s declarant, Mr. Michael Adams, provides similar assessment, but also testifies that such an artisan, alternatively, would have had “at least five years of work experience and training in the design and development of distributed network systems and/or multimedia streaming.” Ex. 2012 ¶ 28. Neither party points out any meaningful difference between the parties’ assessments. We apply Patent Owner’s assessment on the level of ordinary skill in the art. However, our analysis would be the same under either party’s description.

D. Summary of the Asserted Prior Art References

1. Eyal (Exhibit 1005)

Eyal is titled “Streaming Media Search and Continuous Playback System of Media Resources Located by Multiple Network Addresses.” Ex. 1005, code (54). Eyal discloses “a computer system that enables a continuous streaming media playback from a distribution of sites available over a network such as the Internet.” *Id.* at 1:17–19. Figure 19 of Eyal is reproduced below (color annotations added by Petitioner (Pet. 13)).



Annotated Figure 19 of Eyal above illustrates a system that allows media streaming “from multiple sites on the Internet based on personalized criteria set forth by users.” *Id.* at 10:1–3, 32:43–44. User terminal 1710 (red), via network server module 1770 (blue), has access to network media

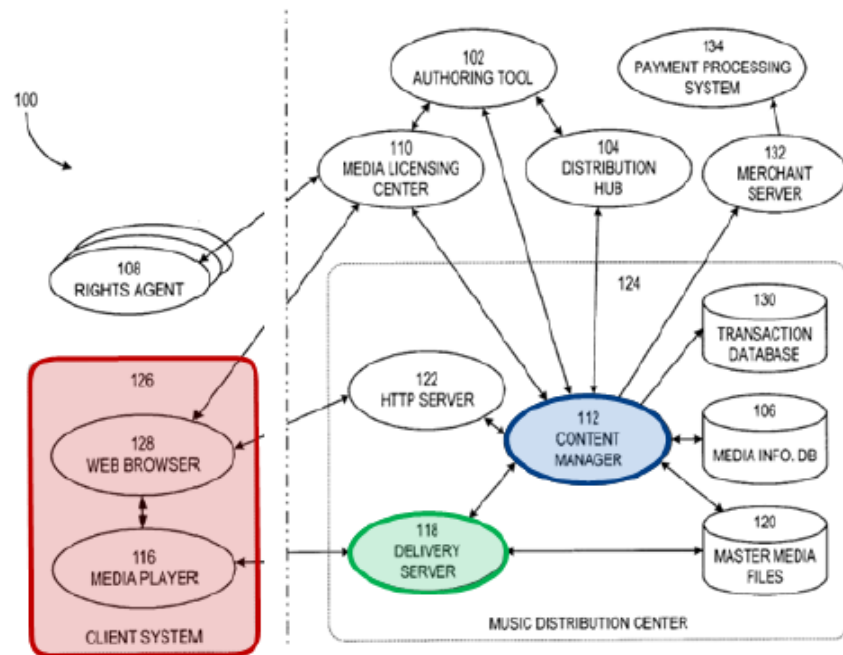
sites 1722 (green) that provide access to media. *Id.* at 32:43–46. Each of media sites 1722 has one or more links to media web resources, which are represented by URLs 1–N. *Id.* at 32:47–48. Media sites 1722 correspond to different locations on the Internet. *Id.* at 32:54–55.

“The network server receives a request for media playback from the network enabled device, selects multiple addresses from the database, and signal[s] the multiple addresses to the network enabled device.” *Id.* at 2:35–38. After receiving a request for media, a play-list generator creates a play-list that includes a plurality of media links and sends it to the requesting device. *Id.* at 4:47–55, 9:13–21, 27:33–35. Each media link in the play-list locates a media file on the network. *Id.* The play-list may provide instructions to the playback device and include a variety of metadata, such as duration, media URL, source website, media type, clip broadcast quality, and image size for video. *Id.* at 12:37–63, 27:35–37. Other media, including targeted commercials, “may be inserted into the play-lists in various locations between media clips.” *Id.* at 13:1–8.

To playback the requested media, “[t]he user terminal then accesses the URL and loads the web resource[s] associated with that media link into a streaming media playback component on the user terminal.” *Id.* at 27:37–40. A play-list that has a plurality of media links allows the media playback component to play media continuously from numerous sites on a network. *Id.* at 27:47–60.

2. Wiser (Exhibit 1006)

Wiser discloses a system and methods for online distribution of digital media data that allows users to select, preview, and download digital media over the Internet. Ex. 1006, 1:7–9, 3:5–10. Figures 1A and 1B of Wiser are reproduced below (annotated and combined by Petitioner (Pet. 26)).



Annotated Figures 1A and 1B above illustrate a system that “separates the management and administration of the purchase of the media content from the delivery of that media content to purchasers.” *Id.* at 6:29–31. The system includes content manager 112, delivery server 118, and at least one client system 126. Content manager 112 handles “the administration and management of all purchases and other transactions” and delivery server 118 provides “the delivery of the purchased media content.” *Id.* at 6:32–36. Client system 126 includes media player 116 and Web browser 128. *Id.* at 5:59–60.

Content manager 112 creates and provides a media voucher to the user in response to a request. *Id.* at 8:19–23. The media voucher includes a unique voucher ID, a media ID, a receipt, and the delivery server address. *Id.* at 8:27–41, Fig. 3. The media voucher is used for tracking a reservation because delivery servers may have a “limited number of active streams of data being delivered at any one time.” *Id.* at 14:65–15:1, 15:10–15, 15:63–16:3, 17:22–28.

3. Madison (Exhibit 1051)

Madison discloses a method and system for uploading, managing and delivering digital content, including streaming media. Ex. 1051, code (57). Figure 1 of Madison is reproduced below.

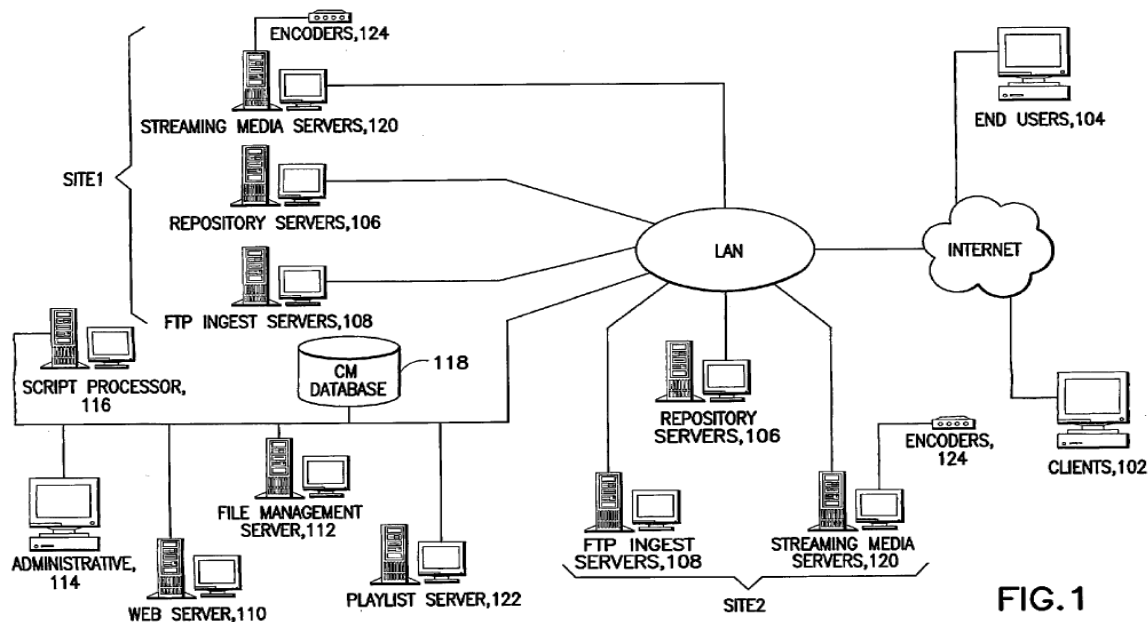


FIG. 1

Figure 1 of Madison above illustrates a system that allows clients 102 to up-load streaming media content, manage the content, and make the content available to end-users 104 via a web site on the Internet. *Id.* ¶ 20.

Specifically, clients 102 up-load content to repository servers 106 either directly, via an HTTP up-load, or via FTP ingest servers 108. *Id.* ¶ 22. Once the content is up-loaded, each client 102 may manage its content via a content management web site provided by client-side web server 110. *Id.* The up-loaded content is eventually transferred to streaming media servers 120, where it is available for streaming via the Internet. *Id.* ¶ 25. An end user may make a request for content by clicking on an URL, which identifies media content. *Id.* ¶ 106. The request is directed to playlist server 122, which will execute the “makeplaylist.asp” program and dynamically generate a playlist redirector file. *Id.* ¶ 108. The redirector file comprises a list of URLs for each stream file, including the proper prefix (“mms://”), hostname (“mediaserver.company.com”), and stream filename (“filename.asf”), such as <“mms://mediaserver.company.com/filename.asf”>. *Id.* ¶¶ 109, 110. Using the redirector file, the end user’s media player pulls each identified stream file from media server 120 identified in the redirector file in the order in which it appears in the file. *Id.* ¶ 111.

E. Obviousness over Eyal and Wiser

Petitioner asserts that claims 15–19, 21, 24, and 27 are unpatentable under § 103(a) as obvious over Eyal and Wiser, citing Dr. Houh’s Declaration for support. Pet. 23–45 (citing Ex. 1003). Patent Owner argues that Eyal and Wiser fail to disclose certain claim limitations, and that Petitioner fails to articulate a reason to combine the prior art teachings,

citing to the Declaration of Mr. Adams for support. PO Resp. 31–47, 59–64 (citing Ex. 2012). For the reasons stated below, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 15–19, 21, 24, and 27 would have been obvious over Eyal and Wiser. We do not find that Patent Owner’s arguments and Mr. Adams’s testimony refute Petitioner’s showing. Our analysis below focuses on the disputed claim elements.

1. “identifier uniquely associated with the client device and a viewing session” and “reservation identification” in a “file” or “playscript”

Claim 15 recites “receiving from a client device . . . signaling to have video content streamed to the client device” and “generating an identifier uniquely associated with the client device and a viewing session for the video content and transmitting to the client device,” in a file. Ex. 1001, 54:4–28. Claim 16 recites that “the identifier is a reservation identification,” and claim 17 requires “a reservation number.” *Id.* at 54:29–32. Claim 18 recites that “the signaling is a request for media.” *Id.* at 54:33–34. Claim 24 requires the file to be “a play script.” *Id.* at 54:57–58.

Petitioner asserts that Eyal in view of Wiser discloses these claim elements. Pet. 27–33, 39–44. Petitioner avers that Eyal teaches “receiving a request for media playback from a network enabled device” (the claimed “signaling to have video content streamed to the client device” and “request for media”). *Id.* at 30, 41 (quoting Ex. 1005, 1:63–2:6, 10:33–45 (“Embodiments of the invention may be implemented on the Internet.”)). Petitioner explains that Eyal teaches, in response to the request for media, generating a play-list (the claimed “file” and “play script”) in a format

compatible with a media player on the client device. *Id.* at 31 (citing Ex. 1005, 27:51–53, 31:24–28 (“The new play-list may be saved in a format that follows predefined protocol so that the play-list and its contents are accessible to a streaming media play interface.”), 33:9–15). Petitioner also avers that Eyal’s play-list comprises URLs identifying the requested media, the delivery server that the user should contact to retrieve the media, and metadata associated with the requested media. *Id.* at 28 (citing Ex. 1005, 19:30–20:38).

Additionally, Petitioner relies on Wiser’s media voucher to disclose a reservation, and Wiser’s voucher ID to teach a unique “identifier,” a “reservation identification,” and a “reservation number.” *Id.* at 27–33, 39–41 (citing Ex. 1006, 1:7–9, 4:55–59, 5:7–12, 8:27–42, 14:65–15:28, 17:21–28, 18:40–46, Fig. 3; Ex. 1003 ¶¶ 141–146, 149–153, 167–168, 170–171). Petitioner explains that Wiser teaches generating a media voucher to respond to a request for media for reserving a delivery server’s resources, and that Wiser’s media voucher includes a unique voucher ID. *Id.* (citing Ex. 1006, 4:55–57, 5:7–12, 8:27–42 (“A media voucher 300 includes a unique voucher ID 302,” which “limits the use of the media voucher 300 to a single purchase or preview transaction”), 14:65–15:18, Fig. 3). Petitioner asserts that a relevant artisan would have used Wiser’s voucher ID as part of Eyal’s play-list. *Id.* at 27–30 (citing Ex. 1003 ¶¶ 141–146).

Dr. Houh testifies that an ordinarily skilled artisan would have had a reason to use Wiser’s voucher ID in Eyal’s play-list because delivery servers may have a “limited number of active streams of data being delivered at any

one time” so that generating and tracking reservations by the content server using voucher IDs is necessary. Ex. 1003 ¶ 144 (quoting Ex. 1006, 14:65–15:1). Dr. Houh also testifies that “[s]ervers’ limited streaming capacity was a common media delivery problem, and well-known solutions existed before the ’360 Patent, including generating a reservation to ensure resource availability for streaming media to the user.” *Id.* ¶ 167. Dr. Houh further testifies that a relevant artisan would have understood Wiser’s voucher ID “to constitute a uniquely generated number since if the ID was not unique, the server could not determine the proper correspondence between the voucher ID and the correct reservation and would be unable to deliver the proper media” to the user’s device. *Id.* ¶ 170. In addition, Dr. Houh testifies that such an artisan would have understood that the voucher ID is uniquely associated with the client device and a viewing session of the media because “voucher ID 302 limits the use of the media voucher 300 to a single purchase or preview transaction.” *Id.* ¶ 151 (citing Ex. 1006, 8:30–33, 15:23–28). We credit Dr. Houh’s testimony as it is consistent with prior art of record. We agree with Petitioner and, for the reasons given, find that Eyal in view of Wiser teaches the aforementioned elements of claims 15–18 and 24.

Patent Owner advances several arguments. PO Resp. 32–34, 39–43, 46. First, Patent Owner argues that “Wiser is specifically directed to audio (music) content, *not* a viewing session for ‘video content’ as required by the claim.” *Id.* at 32–33 (citing Ex. 1006, code (54), 3:51–54, 6:60–64). Patent Owner contends that “Wiser teaches away from video.” *Id.*

Patent Owner’s arguments are unavailing. The Federal Circuit has repeatedly held that “[a] reference must be considered for everything it *teaches* by way of technology and is not limited to the particular *invention* it is describing and attempting to protect.” *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898 (Fed. Cir. 1985); *In re Applied Materials, Inc.*, 692 F.3d 1289, 1298 (Fed. Cir. 2012); *see also Merck & Co., Inc. v. Biocraft Labs. Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) (“[A]ll disclosures of the prior art, including unpreferred embodiments, must be considered.” (quoting *In re Lamberti*, 545 F.2d 747, 750 (CCPA 1976))).

Here, Wiser is not limited to audio or music, as alleged by Patent Owner. Indeed, Wiser states that “[t]his invention relates generally to the field of online commerce, and more particularly, to system and methods for the online distribution of *digital media data* over public communication networks.” Ex. 1006, 1:5–8, 1:23–26 (“digital media, such as computer software, *video*, and audio is purchased in this manner”); *see also id.* at 3:8–10 (“transporting of audio and other digital media over the Internet”) (emphases added). Mr. Adams admitted that “video . . . is included in Wiser’s definition of ‘digital media.’” Ex. 1083, 147:9–147:21. Moreover, a relevant artisan would not have ignored Wiser’s teachings regarding reservations and reservation identifications, even if it were primarily directed to a specific application (e.g., music or audio) that is different from the application claimed (e.g., video) in the ’360 patent. *In re Heck*, 699 F.2d 1331, 1333 (Fed. Cir. 1983) (holding that the “use of patents as references is not limited to what the patentees describe as their own inventions or to the

problems with which they are concerned”); *see also KSR*, 550 U.S. at 420–21 (“The idea that a designer hoping to make an adjustable electronic pedal would ignore Asano because Asano was designed to solve the constant ratio problem makes little sense.”).

Furthermore, one cannot show nonobviousness by attacking references individually where the grounds of unpatentability are based on combinations of references. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). Instead, the test for obviousness is whether the references, taken as a whole, would have suggested the claimed subject matter to a person of ordinary skill in the art at the time the invention was made. *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Here, Eyal discloses generating a play-list in response to a request for video. Ex. 1005, 1:21–25 (“Streaming media available on the Internet include, for example, music, video clips such as movie trailers, home movies, and animation.”), 1:63–2:6, 10:33–45, 11:21–30 (“As used herein, media refers to a combination of audio and/or *video*.”), 11:24–37 (“Examples of video media include movie clips, . . . home movies, movie trailers, or highlights from sporting events.”), 15:37–45.

Wiser discloses that “[t]he media voucher uniquely identifies the media being purchased, the specific purchase transaction, and the specific delivery server to deliver the purchased media to the media player.” Ex. 1006, 4:55–57. Wiser also discloses that “media voucher 300 includes a *unique voucher ID* 302 which . . . limits the use of the media voucher 300 to *a single purchase or preview transaction*.” *Id.* at 8:28–32 (emphases

added). Dr. Houh testifies that an ordinarily skilled artisan would have used Wiser's voucher ID in Eyal's play-list because delivery servers may have a "limited number of active streams of data being delivered at any one time," so that generating and tracking reservations by the content server using voucher IDs is necessary. Ex. 1003 ¶ 144 (citing Ex. 1006, 14:65–15:1). We agree with and credit Dr. Houh's testimony, and we find that such an artisan of ordinary skill would have understood that, in Eyal in combination with Wiser, the voucher ID provided in the play-list is uniquely associated with the client device and a viewing session of the media. Ex. 1003 ¶ 151 (citing Ex. 1006, 8:30–33, 15:23–28).

We do not agree with Patent Owner's assertion that "Wiser teaches away from video." PO Resp. 33 (citing Ex. 2012 ¶ 174). "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Here, nothing in Wiser would discourage a relevant artisan from applying its teachings to video media, as Patent Owner alleges. Patent Owner's argument of teaching away is based on speculation. As discussed above, Wiser's disclosure is not limited to audio media. Ex. 1006, 1:5–8, 1:23–26, 3:8–10; Ex. 1083, 145:20–147:21. The "mere disclosure of alternative designs does not teach away." *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Moreover, *KSR* instructs us that "if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize

that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 550 U.S. at 417. As Dr. Houh testifies, “[s]ervers’ limited streaming capacity was a common media delivery problem, and well-known solutions existed before the ’360 Patent, including generating a reservation to ensure resource availability for streaming media to the user.” Ex. 1003 ¶¶ 106, 167 (citing Ex. 1019, 26³ (Discussion on Resource Reservation Protocols (RSVP) in the book entitled “Communication and Computing for Distributed Multimedia Systems”); Ex. 1023 (RSVP Specification); Ex. 1024, 19⁴ (Discussion on the Reservation Protocol in the book entitled “Multimedia Servers”)).

Second, Patent Owner argues that “Wiser *teaches away* from generating an identifier *uniquely* associated with a client device (i.e., a *single* client device),” because (1) “Wiser states that play back for a single transaction should not be limited to a single client device” and, (2) with regard to a preview transaction, a relevant artisan would have understood that any client device receiving the HTTP response could receive and use the media voucher data to play the requested media. PO Resp. 33–34 (citing Ex. 1006, 2:35–40, 15:24–26; Ex. 2012 ¶¶ 175–176); Sur-reply 11–12.

However, nothing in Wiser discourages a relevant artisan from generating an identifier uniquely associated with a client device. *Gurley*, 27

³ Citations to Exhibit 1019 refer to the page numbers added by Petitioner at the bottom right corner.

⁴ Citations to Exhibit 1024 refer to the page numbers added by Petitioner at the bottom right corner.

F.3d at 553. In its preferred embodiments, Wiser teaches generating a voucher ID uniquely associated with the client device that sent the request for media. Ex. 1006, 8:19–42, 14:37–15:63, Figs 1, 3, 7.

An annotated Figure 1 of Wiser is reproduced below (Pet. 26).

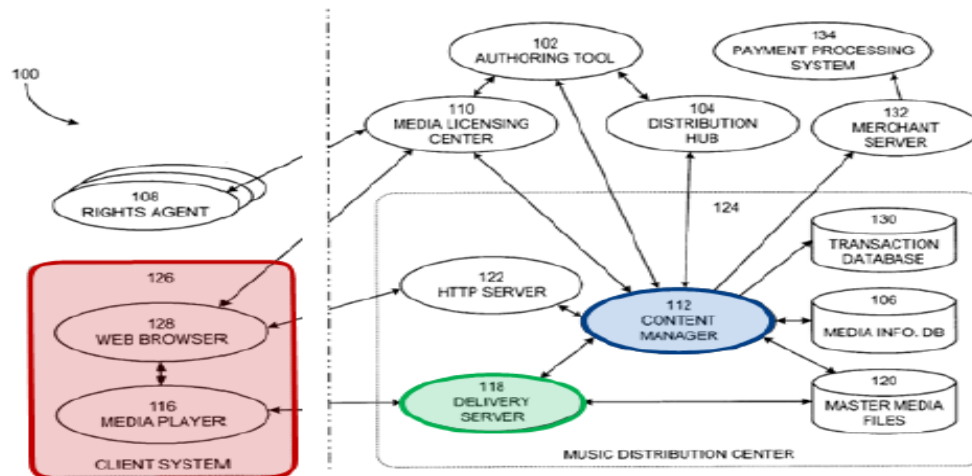
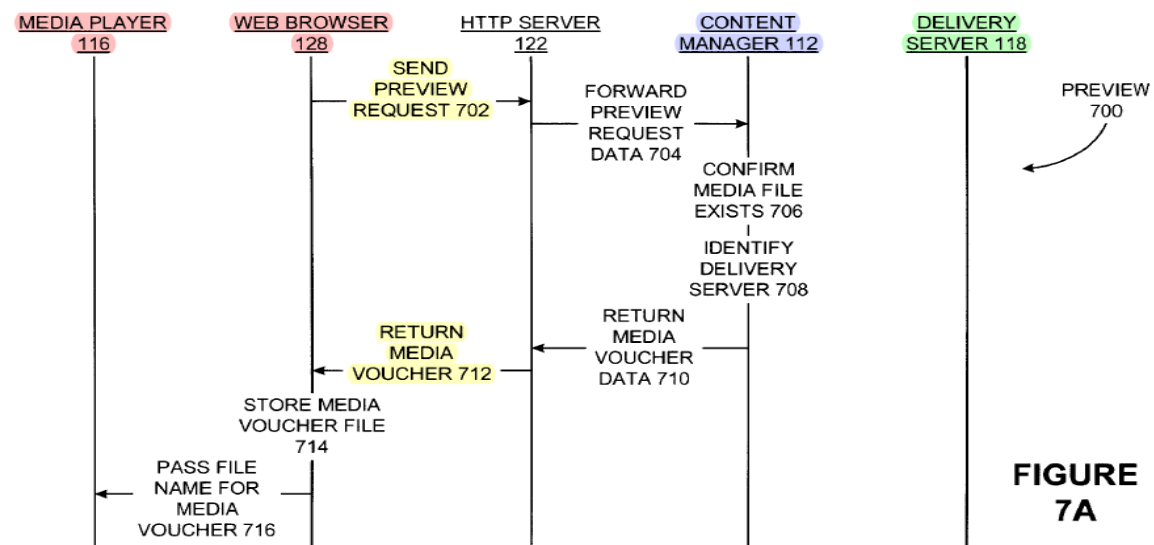
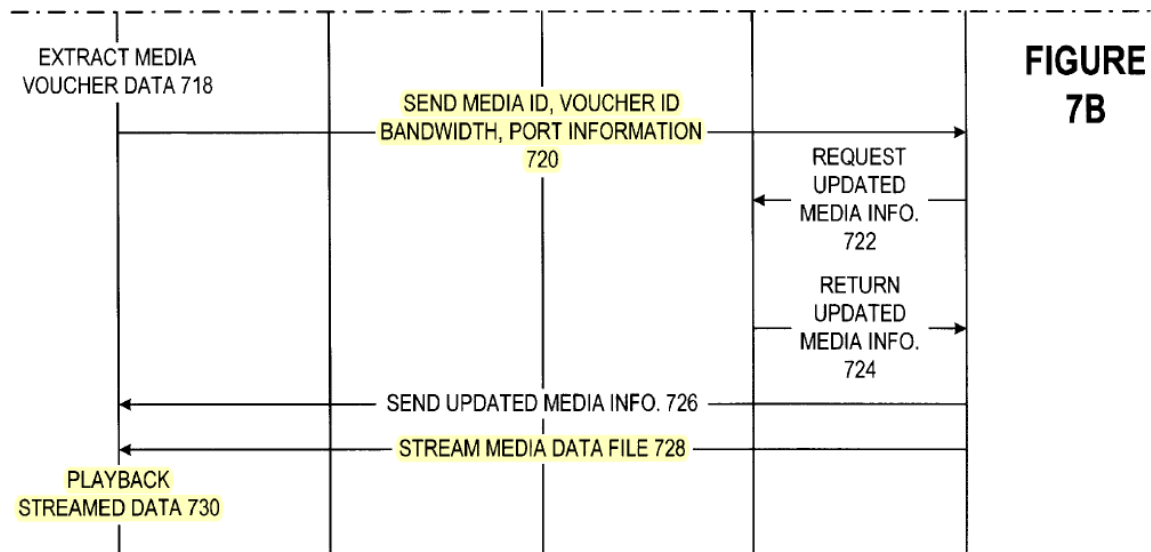


Figure 1 above shows a system that includes client system 126 (red) having Web browser 128 and media player 116. Figures 7A and 7B of Wiser are reproduced below with highlighting added.





As shown in Figures 7A and 7B of Wiser above, Web browser 128 (red) of client system 126 sends preview request 702 (yellow) to HTTP Server 112 and content manager 112 (blue). *Id.* In response, the server returns 712 (yellow) media voucher 300 to Web browser 128. Media voucher 300 includes unique voucher ID 302 network address 308 of delivery server 118 (green), port number, media ID 304, to Web browser 128. *Id.* Media play 116 (red) of client system 126 uses voucher ID 302 and other voucher data in communication 720 (yellow) to obtain the media from delivery server 118. *Id.* Delivery server 118 streams media data file 728 (yellow) to media play 116 of client system 126. *Id.* In this embodiment, Wiser discloses generating a voucher ID uniquely associated with the specific client device that sent the request for media. In another preferred embodiment, Wiser also makes clear that, in response to a request for media, the content manager generates and returns a media voucher, including a

unique voucher ID, back to the specific client device that sent the media request. Ex. 1006, 8:19–42, Figs 1, 3. We agree with and credit Dr. Houh’s testimony that a relevant artisan would have understood that the voucher ID, in the combination of Eyal and Wiser, is uniquely associated with the client device and a viewing session for the media. Ex. 1003 ¶ 151.

We do not agree with Patent Owner’s assertion that “Wiser *teaches away* from generating an identifier *uniquely* associated with a client device (i.e., a *single* client device).” PO Resp. 33–34; Sur-reply 11–12. Although Wiser discloses an alternative design allowing a consumer to playback on one or more devices, the “mere disclosure of alternative designs does not teach away.” *Fulton*, 391 F.3d at 1201.

Further, Patent Owner’s reliance on the following statement in Wiser’s Background Section is misplaced: “a desirable online music distribution system should allow a consumer to playback purchased audio not merely on a single computer, but on any platform equipped with an appropriately licensed playback device and the licensee’s personal identification.” PO Resp. 34 (citing Ex. 1006, 2:35–40); Sur-reply 11–12. That statement does not support Patent Owner’s assumption that Wiser’s voucher ID is associated with multiple devices. Patent Owner incorrectly presumes that every user has multiple appropriate platforms. Further, Patent Owner ignores that, in the preferred embodiments of Wiser discussed above, Wiser teaches generating a voucher ID uniquely associated with the client device that sent the request for media. Ex. 1006, 8:19–42, 14:37–15:63, Figs. 1, 3, 7.

We also disagree with Patent Owner’s argument that a relevant artisan of ordinary skill would have understood that “any client device receiving the HTTP response could receive and use the media voucher data to play the requested media.” PO Resp. 34; Sur-reply 11–12. Patent Owner’s argument is conclusory, and is contrary to Wiser. In the preferred embodiments discussed above, Wiser makes it clear that, in response to a preview request, the voucher ID is sent to the specific client device that requested the preview, not just any client device, as Patent Owner alleges. Ex. 1006, 14:37–15:63, Figs. 1, 7A–B.

For these reasons, we find that Petitioner has shown that Eyal in view of Wiser discloses “an identifier uniquely associated with the client device and a viewing session for the video content,” as required by claim 15.

Third, Patent Owner argues that “the reservation in Wiser is not used to reserve system resources.” PO Resp. 41. According to Patent Owner, “the reservation of Wiser is only used to indicate that the media exists and is available for purchase.” *Id.* (citing Ex. 1006, 8:12–22, 17:3–6; Ex. 2012 ¶ 196); Sur-reply 18. Patent Owner’s arguments are unavailing. To the extent that Patent Owner argues that a “reservation” excludes media, we find that argument to be inconsistent with the definition in the Specification that defines the term “reservation” to encompass reserving “system resources, such as switches, processors, or *media*,” as discussed above in Section II.A. *See* Ex. 1001, 11:59–62 (emphasis added).

Patent Owner also ignores Wiser’s teachings regarding reserving system resources—e.g., “a limited number of active streams of data being

delivered at any one time.” *See, e.g.*, Ex. 1006, 14:66–15:23, Fig. 3. Wiser teaches that each delivery server can only handle a limited number of streams, so a content manager server determines which delivery server is available to service the request and “generates and returns . . . to the HTTP server 122 a media voucher [which] includes the network address 308 of the delivery server 118 and port number, voucher ID 302, and media ID 304.” Ex. 1006, 15:19–23, Fig. 3. Wiser explicitly links tracking the reservation to managing system resources because it is used by the content manager and delivery server to allocate the delivery server’s limited resources and track reservations that are being fulfilled. Ex. 1006, 14:65–15:23 (“When a delivery server 118 allocates a stream then, it updates the content manager 112 with this information.”), 17:22–24 (“The voucher packet includes a voucher ID generated by the content manager 112 to track the reservation.”). Therefore, we do not agree with Patent Owner that Wiser’s voucher ID does not reserve system resources. PO Resp. 41.

Fourth, Patent Owner argues that Wiser does not disclose a play-list or a voucher ID in a play-list. PO Resp. 39–40 (citing Ex. 2012 ¶ 191); Sur-reply 12. However, Patent Owner cannot show nonobviousness by attacking Wiser individually where the ground of unpatentability here is based on the combination of Eyal and Wiser. *Keller*, 642 F.2d at 426. Petitioner asserts that a relevant artisan would have used Wiser’s voucher ID as part of Eyal’s play-list. Pet. 27–33 (citing Ex. 1003 ¶¶ 141–146).

Fifth, Patent Owner argues that “Eyal *teaches away from* including a ‘reservation identification’ in a play-list” because Eyal would send the

reservation identification as part of the control information, not with the play-list. PO Resp. 42–43 (citing Ex. 2012 ¶¶ 199–200). Patent Owner’s argument is unavailing. Nothing in Eyal would discourage a relevant artisan from including a reservation identification in a play-list. *Gurley*, 27 F.3d at 553. Patent Owner incorrectly assumes that if a reservation were implemented in Eyal’s system, the reservation identification must be sent as part of the control information, not in the play-list. Wiser’s voucher ID is not just used for tracking system resources, but also indicates that the media is available for download. Ex. 1006, 17:3–6, 18:12–22. Wiser also makes clear that the voucher ID is sent to the user’s device, along with the media ID and the network address of the delivery server in a media voucher, similar to Eyal’s play-list that includes the media ID and IP address of the delivery server. Ex. 1006, 8:19–42, 15:19–23, Fig. 3; Ex. 1005, 4:47–55, 12:37–63, 15:37–58, 20:9–63, 32:45–57. As Dr. Houh points out, “[l]ike Eyal’s play-list, Wiser’s media voucher includes an identification of the media and the delivery server address.” Ex. 1003 ¶ 144 (citing Ex. 1006, Fig. 3, 8:27–42). Dr. Houh testifies that an ordinarily skilled artisan would have had a reason to use Wiser’s voucher ID in Eyal’s play-list because delivery servers may have a “limited number of active streams of data being delivered at any one time,” so that generating and tracking reservations by the content server using voucher IDs is necessary. *Id.* (quoting Ex. 1006, 14:65–15:1). As discussed above, Dr. Houh also testifies that “[s]ervers’ limited streaming capacity was a common media delivery problem, and well-known solutions existed before the ’360 Patent, including generating a

reservation to ensure resource availability for streaming media to the user.” *Id.* ¶¶ 106, 167 (citing Ex. 1019, 26; Ex. 1023; Ex. 1024, 19). Thus, we do not agree with Patent Owner’s argument that Eyal teaches away from using a “reservation identification” in a play-list. PO Resp. 42–43.

Sixth, Patent Owner argues that “the Eyal system is not the type of system that would even use reservations” because “the Eyal system simply provides a user with the location of media on *third-party* websites on . . . the Internet.” PO Resp. 42, 62–64 (citing Ex. 2012 ¶ 198). Patent Owner’s argument is unavailing. Eyal’s teachings are not limited to streaming media from third-party servers only. Ex. 1005, 10:34–45 (“Other embodiments may be implemented on any network that carries digital information, such as local area networks (LANs), Wide Area Networks (WAN), Extranets, Intranets, Internet, and wireless networks.”). As Petitioner explains, Eyal’s teachings regarding searching are applicable to stream media from both third-party servers or servers managed as part of a single media network. Reply 11–13. Indeed, Mr. Adams admitted that so long as media “links are available and searchable . . . Eyal would work,” regardless of whether the media was stored across the Internet or as part of a single media network. Ex. 1081, 72:18–73:11.

Furthermore, Dr. Houh testifies that methods of reserving resources were well-known in the art by the late 1990s and that a relevant artisan would have recognized that “delivery server resources like memory and available bandwidth were finite and required management to ensure timely delivery and quality of service of streaming media.” Ex. 1003 ¶¶ 106, 145

(citing Ex. 1019, 26; Ex. 1023; Ex. 1024, 19). Indeed, Patent Owner admits that the “use of reservations were generally known” at the time of the invention, and Mr. Adams admits that the RSVP Specification (Ex. 1023) was “a very well-known document that talks about ways of improving the quality of an Internet connection over an IP network.” PO Resp. 63; Ex. 1081, 62:17–25.

In addition, Eyal recognizes that “[m]any Internet streaming media outlets provide a limited number of source nodes” and that “[t]he sites can be unreliable when the number of users accessing the site become congested.” Ex. 1005, 1:45–47. Wiser also points out that “each delivery server 118 is licensed and configured by the system provider to have a limited number of active streams of data being delivered at any one time.” Ex. 1006, 14:65–15:1. As Petitioner explains, “utilizing reservations for streaming media was already well-known and desirable to address finite memory and bandwidth for the delivery server,” and it would have improved Eyal’s user experience by providing a more reliable streaming experience. Pet. 29–30; Reply 12–13; Ex. 1003 ¶¶ 106, 146. Therefore, we do not agree with Patent Owner’s arguments that “the Eyal system is not the type of system that would even use reservations” or that “the Eyal system simply provides a user with the location of media on *third-party* websites on . . . the Internet.” PO Resp. 42, 62–64 (citing Ex. 2012 ¶ 198).

Finally, Patent Owner argues that Eyal does not disclose a “file,” as required by claim 15 or a “play script,” as required by claim 24, because Eyal’s play-list does not disclose: (1) “an indication of one or more

segments of the video content,” (2) a URL to facilitate streaming of “the one or more segments,” (3) “information instructing the client device” how to communicate with a resource/advertiser server, and “the identifier.” PO Resp. 41–42, 46 (citing Ex. 2012 ¶¶ 197, 208).

Patent Owner’s argument is unavailing. As discussed above and in Section II.E.4 below, Petitioner has provided a sufficient reason why a relevant artisan would have been motivated to use Wiser’s voucher ID in Eyal’s play-list, and Petitioner has shown that Eyal in view of Wiser discloses that, in response to a request for video media or a signaling, generating a play-list (a “file” or “play script”) that includes a voucher ID (“the identifier” or a “reservation identification”). As discussed in Section II.E.2 below, Petitioner has shown that Eyal’s play-list also contains “an indication of one or more segments of the video content.” As discussed in Section II.E.3 below, Petitioner has shown that Eyal’s play-list further contains URLs to facilitate streaming of segments of the requested media and “information instructing the client device” how to communicate with the streaming servers.

For these reasons, we find that Petitioner has shown that Eyal in view of Wiser discloses the aforementioned elements of claims 15–18 and 24.

2. “One or more segments of the video content”

Claim 15 recites “an indication of one or more segments of the video content.” Ex. 1001, 54:13–14. Petitioner asserts that Eyal’s play-list contains links to multiple segments of the requested media and that each segment of the requested media is identified as a separate URL. Pet. 33

(citing Ex. 1005, 12:37–46 (“metadata information include . . . identification”), 15:37–45 (“A play-list generator module 260 generates a plurality of play-lists based on information in the database management system 245.”), 20:9–14 (“The identifier provides name of a specific media creation.”); Ex. 1003 ¶ 154). We agree with Petitioner and, for the reasons given, find that Eyal teaches the aforementioned element of claim 15.

Patent Owner argues that claim 15 “is directed to a method of streaming a single video in *segments* (i.e., segment-by-segment/one or more *segments* at a time), not the entire video all together.” PO Resp. 34–36. Patent Owner also argues that the “claims and specification of the ’360 patent distinguish between video (e.g., an *entire* movie) and ‘segments’ of the video (e.g., a segment of a movie).” *Id.* According to Patent Owner, “the ’044 provisional application, which is incorporated by reference into the ’360 patent, states that the media file name (i.e., ‘mediaid’) in a URL ‘represents the unique identifier for an individual piece of content that is a part of the presentation.’” *Id.* (quoting Ex. 1011, 19; Ex. 2012 ¶ 180). Patent Owner contends that a “segment” is not “stand-alone individual piece of content.” Sur-reply 13–14. Patent Owner also argues that “Eyal simply does *not* disclose . . . streaming a *single* video in . . . a ‘plurality of *segments*’ (e.g., a segment of a movie) as set forth in the claims.” PO Resp. 34–35 (citing Ex. 2012 ¶ 181). Patent Owner further avers that Eyal is just a search engine. *Id.*

Patent Owner’s arguments are unavailing. Patent Owner’s arguments improperly rest on the premise that the requested media is a single entire

piece of media (e.g., an entire movie) and “segments” are segments of the movie. PO Resp. 34–36; Sur-reply 13–14. The ’360 patent makes clear that the requested media may be a single media item or multiple media items (e.g., a program with multiple media items) and that “[m]edia may include one or more *media clips or a part of a media clip*.” Ex. 1001, 4:64–65, 5:25–28, 19:60–62, 20:43–44 (emphasis added). The Specification discloses that the “content owner may create a program having one or more media items” including “*a media clip for a movie* and an advertisement,” and that a “viewer may desire to receive one or more of the media identified in the program.” *Id.* (emphasis added). Hence, the requested media may include “a media clip for a movie” or a program having a plurality of media items, not necessarily a single piece of media or an entire movie as Patent Owner alleges. Interpreting the requested media to require a single entire media item or an entire movie is inconsistent with the Specification.

In addition, we do not agree with Patent Owner that “Eyal simply does *not* disclose . . . streaming a *single* video in . . . a ‘plurality of *segments*’ (e.g., a segment of a movie) as set forth in the claims,” or that Eyal is just a search engine. PO Resp. 34–35; Sur-reply 13–14. Patent Owner fails to acknowledge that Eyal’s play-list includes links to multiple segments of the requested video content. Ex. 1005, 12:37–43, 12:46, 15:37–45, 20:9–14. Eyal discloses delivering segments, such as movie clips, movie trailers, highlights from sporting events, music videos, and individual songs of a program. *Id.* at 11:21–37, 16:6–17 (“a user on user terminal 210 may select to hear Jazz programming” using “the features of a user-interface” and the

user may “retrieve additional media clip information”), 30:29–37 (“media clips are played back on the user terminal” “continuously, so that the user’s media experience resembles listening to an album”). Eyal also discloses and that “links to streaming media commercials may be inserted into the play-lists in various location between media clips.” *Id.* at 13:1–3. Further, Eyal discloses that the user-interactive features of the user-interface “allow users to submit search requests and other media requests for playback,” such as menu fields 1910–1940 shown in Figure 21 of Eyal, allowing the user to request songs or media clips from a specific artist or record. *Id.* at 36:3–48, Fig. 21. During his cross-examination by Petitioner, Mr. Adams admitted that Eyal’s search request is a media request. He testified that “by making a request for the top jazz hits playlist, . . . the user is making a request for media,” and that “[i]n this context, the playlist has a number of songs on it. And so[,] the totality of the playlist is all of the songs one after another. And each song is part of that playlist.” Ex. 1081, 82:17–83:8.

For the foregoing reasons, we find that Petitioner has shown sufficiently that Eyal in view of Wiser discloses “an indication of one or more segments of the video content,” as recited in claim 15.

3. URLs identifying resources, “information instructing the client device how to communicate with . . . resources” and “an advertising server”

Claim 15 requires, in one or more files, (1) a URL including an identification of resources, (2) “information instructing the client device how to communicate with the one or more resources” to cause the video segments to be streamed to the client device, and (3) “information

instructing the client device how to communicate with an advertising server to cause one or more advertisements to be streamed” to the client device. Ex. 1001, 54:14–28. Claim 19 requires the “information instructing the client device how to communicate with the one or more resources . . . is based on one or more media rules.” *Id.* at 54:35–40.

Petitioner asserts that Eyal in view of Wiser discloses these claim elements. Pet. 34–39, 41–42. Petitioner contends that Eyal’s play-list contains a URL including an identification of “one or more resources.” *Id.* at 34–36 (citing Ex. 1005, 12:4–8 (“An address may include a [URL] for network and Internet sites.”), 22:55–56 (“The database stores the URL of the media sites”), 27:33–37 (“Each play-list may include one or more media link URLs and media metadata.”), 32:43–65 (“a distributed architecture in which a user terminal accesses media resources from a plurality of network sites”), Fig. 19; Ex. 1003 ¶¶ 155–157).

Petitioner also asserts that Eyal teaches providing information instructing the client device how to communicate with one or more resources. *Id.* at 36–37. Petitioner explains that Eyal discloses that “media playback component 211 being controlled by one or more modules of system 200,” and that “web server module 270 signals control information to an application program interface 276 of the media playback component 211.” *Id.* (citing Ex. 1005, 21:3–7). According to Petitioner, “[t]his control information causes media playback component to access the segments, such that the content distribution network streams the segments to the client device.” *Id.* Petitioner also explains that Eyal’s play-lists include

instructions relating to obtaining media from the URLs in a particular sequence, instructions relating to the proper protocol for the user device, and instructions telling the client device how to obtain, present and adjust the media (e.g., media duration, media URL, source web site, media type, clip broadcast quality, and image size for videos). *Id.* (citing Ex. 1005, 12:43–63, 13:1–4, 13:52–54, 21:35–46, 27:53–55).

Petitioner asserts that Eyal teaches providing information instructing the client device how to communicate with an advertising server. *Id.* Petitioner explains that Eyal teaches that the media links include “links to streaming media commercials” that are “inserted into the play-lists in various locations between media clips,” and that the streaming media commercials “are targeted to the audience likely to listen to the media available on the play-list.” *Id.* (citing Ex. 1005, 13:1–5). Dr. Houh testifies that a relevant artisan would have understood that a media site for streaming media commercials would be an advertising server and that, similarly, the URLs in Eyal’s play-list “correspond to different locations” for such advertising servers. Ex. 1003 ¶ 162 (citing Ex. 1005, 22:55–56, 32:54–7).

Petitioner also asserts that Eyal teaches that the information instructing the client device how to communicate with the streaming server is based on one or more media rules. Pet. 41–42. Petitioner explains that Eyal’s play-list includes a “sequence for automatically and continuously playing back media may be repeated for each media link included in the play-list.” *Id.* (quoting Ex. 1005, 27:53–55). Petitioner also explains that the protocols specified in the URLs also instruct the client device how to

communicate with the server. *Id.* (citing Ex. 1005, 21:35–41; Ex. 1003 ¶¶ 174–175). We agree with Petitioner’s reasoning and find that for the reasons given, Eyal in view of Wisser teaches the aforementioned claim elements of claims 15 and 19.

Patent Owner advances several arguments. PO Resp. 36–39. First, Patent Owner argues that Eyal does not disclose a file including “information instructing the client device” because the control information in Eyal is transmitted separately from the play-list. *Id.* at 36. However, claim 15 recites “in one or more files.” Therefore, claim 15 does not require the information instructing the client device to be in the same file as the play-list that contains the URLs or other claimed elements. In any event, Eyal’s play-list includes information instructing the user device how to communicate with network resources for streaming, such as instructions relating to obtaining media segments from the URLs in a particular sequence, instructions relating to the proper protocol for the user device, instructions relating to the media format, and instructions for inserting streaming advertisement media. Ex. 1005, 12:43–63, 13:1–4, 13:52–54, 21:35–46, 27:53–55.

Second, Patent Owner argues that Eyal’s control information is used to control a client device, not “information instructing” a client device how to communication with a server to cause video segments to be streamed. PO Resp. 37 (citing Ex. 1005, 20:41–45; Ex. 2012 ¶ 185); Sur-reply 14–15. Patent Owner’s argument is unavailing. Eyal also teaches that “web server module 270 signals *control information* to an application program interface

276 of the media playback component 211,” and that “web server module 270 signals commands, with one or more URLs corresponding to media resources selected to be signaled to the user terminal.” Ex. 1005, 21:5–12 (emphasis added). Eyal further teaches that “[a]s an example, commands from web server module 270 may be *instructions* that use each URL as an argument[.]” *Id.* at 21:12–16 (emphasis added).

Third, Patent Owner argues that the mere sequence of the URLs is not the “information” of claim 15, or the “media rule” of claim 19, because the ordering of URLs on a list is not “information instructing” the client device how to communicate with a resource to cause video segments to be streamed. PO Resp. 38, 44 (citing Ex. 2012 ¶¶ 187, 202).

Patent Owner also argues that the protocol that is part of the URL is not the “information” of claim 15 or the “media rule” of claim 19, because the claim requires the “information” to be separate from the URL. *Id.* at 39, 44; Sur-reply 15, 18. Patent Owner contends that “the only metadata disclosed as being included in a play-list other than a media URL relates to *how* the user’s device *displays/presents* the media (e.g., identifying the title, artist, rating, duration on the screen; adjusting the size of the media on the screen).” PO Resp. 38–39. According to Patent Owner, “[Petitioner’s] expert agrees that instructions about *how* the player should *display/present* the media to the viewer are *not* instructions related to the client device obtaining media (i.e., causing the segments to be streamed).” *Id.* (citing Ex. 2019, 290:12–291:8).

Patent Owner's arguments improperly rest on the premise that instructions cannot be part of the URLs. The Federal Circuit has explained that a claim element should not be construed narrowly to require a separate and distinct component, when the claim or specification indicates that the claim element need not be a separate component, or the specification suggests that a single component can function as both elements. *Linear Tech. Corp. v. ITC*, 566 F.3d 1049, 1054–56 (Fed. Cir. 2009); *see also Powell v. The Home Depot U.S.A., Inc.*, 663 F.3d 1221, 1231–32 (Fed. Cir. 2011) (stating that because “the specification teaches that the cutting box may also function as a ‘dust collection structure’ to collect sawdust and wood chips generated during the wood cutting process, . . . it does not suggest that the claim terms ‘cutting box’ and ‘dust collection structure’ require separate structures”); *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1303 (Fed. Cir. 2011) (“The claims and the specifications indicate that the ‘needle holder’ and ‘retainer member’ need not be separately molded pieces.”); *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1310 (Fed. Cir. 2005) (noting that the asserted claim language did not support a limitation requiring that the claimed “RF receiver” and “destination processor” be separate and distinct).

Here, the claims do not require the instructing information to be separate from the URLs. The '360 patent, which incorporates by reference U.S. Provisional Application No. 60/263,044 (“the '044 application,” Ex. 1011), discloses that “there are many possible ways of formatting the URLs.” Ex. 1011, 18. Indeed, the Specification also makes clear a URL

may include other claim elements, such as the identification of the requested media and the reservation identification. Ex. 1001, 10:18–21, 26:19–21. Mr. Adams admitted that formatting the instructions “as part of the URL string doesn’t actually . . . change[] anything . . . you’re still transmitting the instructions,” and that “[i]t’s a formatting difference, quite frankly” and “[s]o I think actually both satisfy the claims in my opinion.” Ex. 1081, 180:22–181:5. Moreover, when arguing that the January 13, 2001 draft application provides written description support for the challenged claims, Patent Owner alleges that the presentation ID in a URL is the claimed “instruction.” Sur-reply 7; PO Resp. 26; Ex. 2017, 10; Ex. 1011, 18 (providing an example of a URL that provides the server type, reservation identification, server name, order identification, presentation identification, and media identification—“rtcp://servertype.reservationid.nrpname.net/orderid/presentationid/mediaid”).

Also, Patent Owner’s reliance on Dr. Houh’s testimony is misplaced. Dr. Houh’s testimony was answering Patent Owner’s questions regarding the ’044 application’s disclosure directed to the “instructions about how the player should present the media to the viewer,” not Eyal’s instructions. Ex. 2019, 288:4–10. Thus, Dr. Houh’s testimony does not support Patent Owner’s arguments regarding Eyal’s instructions.

In addition, we agree with Petitioner that Eyal discloses information instructing the client device how to communicate with resources to cause video segments to be streamed to the client device because Eyal’s play-list includes instructions related to a media format, protocol, media sequence,

and advertisement insertion, the types of instructions contemplated by the '360 patent. Ex. 1005, 12:43–63, 13:1–4, 13:52–54, 21:35–46, 27:53–55; Ex. 1001, 9:50–55 (“instructions, such as special media sequencing instruction, late binding media instructions, and/or special routing instructions”); *see also* the related patents that have the same disclosure as the '360 patent—IPR2021-00158, Ex. 1001 (Patent 9,026,673 B2), claim 26 (“instructions” to obtain the requested media “include one or more instructions relating to at least one of a media format, a media language, a media sequence, and an advertisement insertion”); IPR2021-00308, Ex. 1001 (Patent 8,825,887 B2), claim 111 (same). Indeed, Mr. Adams admitted that sequencing instructions are related to how the media is obtained because “[i]t would be normal to obtain the portions or the media clips in the order in which they’re going to be played.” Ex. 1081, 131:14–19.

We also agree with Petitioner that Eyal teaches that the information instructing the client device how to communicate with the streaming server is based on one or more “media rules,” as recited in claim 19. Pet. 41–42; Ex. 1003 ¶ 174. The '360 patent discloses “media rules to determine the sequence in which the media clips are to be streamed [and] where the media clips are to be placed.” Ex. 1001, 10:37–40. Similarly, Eyal’s play-list includes a “sequence for automatically and continuously playing back media [which] may be repeated for each media link included in the play-list . . . , thus allowing the media play back component to automatically aid continuously play[ing] back media using numerous sites on a network.”

Ex. 1005, 27:53–59. In addition, the protocol information specified in Eyal’s play-list is the instruction for obtaining the segments, which is based on the rules of the specific protocol. Ex. 1005, 21:35–41.

For these reasons, we find Petitioner has shown that Eyal in view of Wiser teaches the aforementioned elements in claims 15 and 19.

4. Reasons to combine the teachings of Eyal and Wiser

Petitioner avers that, in light of Wiser, a relevant artisan would have been motivated to provide a voucher ID in Eyal’s play-list “to track and allocate finite system resources, such as the number of streams a delivery server is able to handle and to allow the delivery server to validate and authenticate the user requesting the media file.” Pet. 27–33 (citing Ex. 1006, 5:7–12, 14:65–15:18); Ex. 1003 ¶¶ 141–146, 149–153. Dr. Houh testifies that Wiser explains that generating and tracking reservations by the content server using a voucher ID is necessary because delivery servers may have a “limited number of active streams of data being delivered at any one time.” Ex. 1003 ¶ 144 (quoting Ex. 1006, 14:65–15:1). We find that Petitioner has demonstrated that a person of ordinary skill would have combined Eyal and Wiser.

Patent Owner advances several arguments in response. First, Patent Owner argues that Eyal and Wiser disclose “*fundamentally different systems*” because Eyal discloses a “*search engine* that enables a user to search for and obtain media from *third party* websites,” whereas Wiser’s system “stores media (music) and securely delivers/streams that media to a user device.” PO Resp. 59–61 (citing Ex. 2012 ¶¶ 140–146). Patent Owner

avers that, because Eyal does not manage the streaming servers, Eyal does not have to consider reserving system resources, and that a relevant artisan would not have been motivated to combine Wiser with Eyal. *Id.*; Sur-reply 15–17.

Patent Owner’s arguments are based on speculation. As discussed above in Section II.E.1, Eyal’s teachings are not limited to streaming media from third-party servers only. Ex. 1005, 10:34–45. We agree with Petitioner that Eyal’s teachings regarding searching are applicable to streaming media from both third-party servers or servers managed as part of a single media network. Reply 11–13. Indeed, Mr. Adams admitted that so long as media “links are available and searchable . . . Eyal would work,” regardless of whether the media was stored across the Internet or as part of a single media network. Ex. 1081, 72:18–73:11. We have also rejected Patent Owner’s argument that Eyal is just a search engine for the reasons discussed in Section II.E.2 above.

Furthermore, Dr. Houh testifies that methods of reserving resources were well-known in the art by the late 1990s and that a relevant artisan would have recognized that delivery server resources, such as memory and available bandwidth, were finite and needed to be managed to ensure timely delivery and quality of service of streaming media. Ex. 1003 ¶¶ 106, 145 (citing Ex. 1019, 202; Ex. 1023; Ex. 1024, 40). Indeed, Patent Owner admits that the “use of reservations were generally known” at the time of the invention, and Mr. Adams admitted that the RSVP Specification (Ex. 1023) was “a very well-known document that talks about ways of improving the

quality of an Internet connection over an IP network.” PO Resp. 63; Ex. 1081, 62:17–25. The RSVP Specification is “a resource reservation setup protocol designed for an integrated services Internet,” providing “receiver-initiated setup of resource reservations for multicast or unicast data flows, with good scaling and robustness properties.” Ex. 1023, 1.

In addition, Eyal recognizes that “[m]any Internet streaming media outlets provide a limited number of source nodes” and that “[t]he sites can be unreliable when the number of users accessing the site become congested.” Ex. 1005, 1:45–47. Wiser teaches that “each delivery server 118 is licensed and configured by the system provider to have a limited number of active streams of data being delivered at any one time.” Ex. 1006, 14:66–15:1. Dr. Houh testifies that a relevant artisan would have been motivated to modify Eyal’s play-list to provide a voucher ID, in light of Wiser, because “utilizing reservations for streaming media was already well-known and desirable to address finite memory and bandwidth for the delivery server.” Ex. 1003 ¶¶ 106, 145–146. “[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 550 U.S. at 418 (*quoting Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)). For the foregoing reasons, we find that Petitioner has articulated an adequate reason to combine the teachings of Eyal and Wiser.

Second, Patent Owner argues that Wiser’s “voucher ID is not used to reserve system resources,” and “the reservation of Wiser is only used to

indicate that the media exists and is available for purchase.” PO Resp. 61–62; Sur-reply 18. We have rejected these arguments for the reasons discussed in Section II.E.1.

Finally, Patent Owner argues that “Eyal teaches away from the use of a voucher ID because the Eyal system simply provides a user with the location of media on *third-party* websites on a network such as the Internet.” PO Res. 62–64. We also have rejected this argument for the reasons discussed in Section II.E.1.

For the foregoing reasons, we find that Petitioner has articulated an adequate reason to combine the teachings of Eyal and Wiser.

5. Remaining dependent claims

Petitioner has accounted for the limitations recited in each of the remaining dependent claims—claims 21 and 27. Pet. 42–45. Claim 21 recites “a unique identifier associated with (i) the one or more segments and (ii) rules for streaming the one or more segments.” Ex. 1001, 54:44–49. Petitioner asserts that Eyal teaches this claim element. Pet. 42–43 (citing Ex. 1005, 20:9–13 (“metadata information that may be included in media and metadata database 247 include identifier information”), 20:12–14 (“The identifier may provide name of a specific media creation.”); Ex. 1003 ¶¶ 176–177). Dr. Houh testifies that a relevant artisan would have understood that the identifier (name of a media creation) in Eyal uniquely identifies the one or more segments. Ex. 1003 ¶¶ 176–177. Petitioner also explains that the unique identifier in Eyal is associated with a rule for streaming the segment, such as a “sequence for automatically and

continuously playing back media may be repeated for each media link included in the play-list.” Pet. 42–43 (citing Ex. 1005, 27:55–58).

Patent Owner advances several arguments. First, Patent Owner argues that Eyal does not disclose “one or more *segments* of *the* video content.” PO Resp. 45. We have rejected this argument for the reasons discussed in Section II.E.2.

Second, Patent Owner argues that “a file name has nothing to do with the sequence/order of the playlist.” *Id.* According to Patent Owner, because “a file name may appear in *many* different play-lists,” “the file name is not a unique identifier of the sequence/order of the playlist.” *Id.*

Patent Owner’s arguments are unavailing. The ’360 patent itself indicates that the same segment may be in multiple programs or presentations. Ex. 1001, 51:7–11. In addition, as Petitioner explains, if the media creation in Eyal was the first season of Seinfeld, the identifier could be “Seinfeld-S01,” and such an identifier is uniquely associated with the first season of Seinfeld. Reply 19–20. The episodes (“one or more segments”) in that season are played in order, and that ordering is the “sequence for automatically and continuously playing back media,” as taught by Eyal. *Id.*; Pet. 43 (citing Ex. 1005, 27:55–58).

Finally, Patent Owner argues that the name of a media creation does not teach a “*unique* identifier” associated with one or more segments. Sur-reply 18. Patent Owner’s argument is unavailing. We agree with and credit Dr. Houh’s testimony that a relevant artisan would have understood that the name of a media creation uniquely identifies “one or more

segments” because “if the name of the media creation was not unique, the server could not determine the proper correspondence between the name of the media creation and the correct media file and would be unable to deliver the proper media.” Ex. 1003 ¶ 177.

For the foregoing reasons, we find Petitioner has shown that Eyal in view of Wiser teaches or suggests the aforementioned element in claim 21.

As to claim 27 that recites “the one or more advertisements are dynamically generated for a presentation associated with the video content,” Petitioner asserts that Eyal’s play-list generator module “generates a plurality of play-lists based on information in the database management system 245.” Pet. 44–45 (citing Ex. 1005, 15:37–39). Petitioner explains that “links to streaming media commercials” are “inserted into the play-lists in various location between media clips” and that the play-lists, including the links to streaming media commercials, are dynamically generated for a presentation associated with the video content. *Id.* (citing Ex. 1005, 13:1–5 (The commercials “are targeted to the audience likely to listen to the media available on the play-list.”), 33:12–14 (“The play-lists may be generated for preferences and profiles specified by the user.”); Ex. 1003 ¶ 181).

Patent Owner advances two arguments. First, Patent Owner argues that Eyal’s targeted advertising is not “dynamically generated” because “[d]ynamically’ generating advertisements refers to making a determination of an advertisement to insert into a video *at the time the video is being played.*” PO Resp. 46–47 (citing Ex. 1001, 11:20–12:64) (emphasis added).

However, Patent Owner admits that the '360 patent describes dynamically selecting advertising “at the time the play script is being built,” not necessarily “at the time the video is being played.” Sur-reply 19. Mr. Adams also admitted that, in the context of the '360 patent, “dynamically generating advertisements” refers to advertisements being inserted “*after the request has been received*, but not necessarily during the actual playback of the media.” Ex. 1083, 156:6–157:3 (emphasis added).

Second, Patent Owner argues that “Eyal might include targeted ads in *pre-created* play-lists,” but Eyal does not teach “the dynamic selection of ad content while a playscript is being created.” Sur-reply 19 (emphasis added). However, as discussed above in Section II.E.1, Eyal makes clear that, in response to the media request, Eyal’s play-list generator module generates a play-list in a format compatible with a media player on the client device. Ex. 1005, 9:14–16, 15:37–45, 19:30–20:38, 21:14–16, 33:9–15, 27:51–53, 31:24–28. Thus, Eyal’s play-list is generated after receiving the request for media from the client device, not “pre-created” as Patent Owner alleges.

More importantly, Eyal makes clear that the play-list in the response, including streaming media commercials, is generated after receiving the request for media from the client device. Ex. 1005, 13:1–5, 33:12–15. Indeed, Mr. Adams admitted that, in Eyal, “these media streaming commercials would be inserted into the playlist after the user made its search request,” and that “I think it’s clear here that by the time the media player receives the playlist, the link to commercials are in the playlist.” Ex. 1083, 37:18–25, 38:19–22, 39:4–7. Therefore, we agree with Petitioner that

Eyal's play-lists, including the links to streaming media commercials, are dynamically generated for a presentation associated with the video content.

For the foregoing reasons, we find that Petitioner has shown that claims 21 and 27 would have been obvious over Eyal and Wiser.

6. Conclusion on Obviousness over Eyal and Wiser

For the foregoing reasons, we find that Petitioner has shown by a preponderance of the evidence that claims 15–19, 21, 24, and 27 are unpatentable under § 103(a) as obvious over Eyal in view of Wiser.

F. Obviousness over Madison and Wiser

Petitioner asserts that claims 15, 16, 19, 21, and 27 are unpatentable under § 103(a) as obvious over Madison and Wiser. Pet. 45–68.

Patent Owner counters that Madison is not prior art. PO Resp. 24–31. Patent Owner also argues that the combination does not teach certain claim limitations, and that there is no motivation to combine Madison with Wiser. *Id.* at 47–59, 64–66. For the reasons stated below, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 15, 16, 19, 21, and 27 would have been obvious over Madison and Wiser. We do not find that Patent Owner's arguments and Mr. Adams's testimony refute Petitioner's showing. Our analysis below focuses on the disputed claim elements.

1. Madison's priority date

Madison claims priority to U.S. Provisional Application 60/263,058 ("the '058 application," Ex. 1052) filed on January 18, 2001. Ex. 1051, code

(60). “A reference patent is only entitled to claim the benefit of the filing date of its provisional application if the disclosure of the provisional application provided support for the claims in the reference patent in compliance with § 112 ¶ 1.” *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1381 (Fed. Cir. 2015). Petitioner shows that Madison’s claim 1 is supported by the ’058 application by providing a claim chart mapping the limitations of Madison’s claim 1 to the ’058 application.⁵ Pet. 49–51. Patent Owner does not dispute Petitioner’s showing, but argues that the challenged claims of the ’360 patent are entitled to a priority date of January 13, 2001.

Based on the evidence before us, we are persuaded by Petitioner’s showing. Thus, Petitioner has shown that Madison is entitled to the priority date of January 18, 2001. Pet. 45–68; Ex. 1003 ¶ 140; Exs. 1051, 1052. For the reasons discussed below, we find that Patent Owner fails to show that the challenged claims of the ’360 patent are entitled to a priority date earlier than of January 18, 2002, and thus, Madison is prior art against the challenged claims of the ’360 patent.

2. Priority date of the challenged claims

Through two continuation applications, the ’360 patent claims priority to U.S. Application No. 11/680,407 (“the ’407 application”), which is a

⁵ Petitioner also shows that the ’058 application provides support for all citations to Madison relied upon by Petitioner by providing cross-citations to the ’058 application in its analysis. Pet. 45–68.

divisional application of U.S. Application No. 10/051,406 (“the ’406 application”), which was a continuation-in-part (“CIP”) application of U.S. Application No. 09/838,993 (“the ’993 application,” Ex. 2024), which was a CIP application of U.S. Patent Application No. 09/766,519 (“the ’519 application,” Ex. 2025). The ’360 patent also claims priority to the ’044 application through the ’407 application and the ’406 application.

a. Principles of Law

“It is elementary patent law that a patent application is entitled to the benefit of the filing date of an earlier filed application only if the disclosure of the earlier application provides support for the claims of the later application, as required by 35 U.S.C. § 112.” *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306 (Fed. Cir. 2008); *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294 (Fed. Cir. 2002); *Lucent Techs., Inc. v. Gateway, Inc.*, 543 F.3d 710, 718 (Fed. Cir. 2008) (“Patent claims are awarded priority on a claim-by-claim basis based on the disclosure in the priority applications.”). The test for determining compliance with the written description requirement under § 112 ¶ 1 is whether the original disclosure of the earlier-filed application reasonably would have conveyed to one with ordinary skill in the art that the inventor had possession the claimed subject matter at the time of the earlier-filed application. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

b. The '993 application, the '519 application, and the draft application

Claim 15 recites:

(iii) information instructing the client device how to communicate with the one or more resources of the content distribution network to cause the plurality of segments to be streamed to the client device by the content distribution network,

(iv) information instructing the client device how to communicate with an advertising server to cause one or more advertisements to be streamed from the advertising server to the client device in sequence with the streaming of the plurality of segments to the client device by the content distribution network,

Ex. 1001, 54:18–28. By virtue of their dependencies, claims 16, 19, 21, and 27 also require these “instructing” claim elements.

Patent Owner argues that the '360 patent has priority as of January 13, 2001. PO Resp. 24–31. Patent Owner proffers a draft patent application that was allegedly prepared no later than January 13, 2001 (“the draft application,” Ex. 2016), to establish conception. *Id.* According to Patent Owner, one of the inventors, Don Bate, exercised diligence from the time of conception until the constructive reduction to practice six days later by filing the '519 application. *Id.* (citing Ex. 2013 ¶¶ 11, 17–22). Patent Owner avers that the '519 application and the '993 application⁶ each contain the same subject matter disclosed in the draft application, and that each of

⁶ Patent Owner relies on U.S. Patent No. 7,054,949 (“the '949 patent,” Ex. 2024) that issued from the '993 application. We assume that there are no meaningful differences between the original disclosure of the '993 application and the '949 patent for purposes of this Decision.

these three applications provides support for the claims at issue. *Id.* (citing Exs. 2017, 2020, 2021).

In particular, Patent Owner relies on the “presentation identification” disclosed in these applications to provides support for the “instructing” claim elements. Ex. 2017, 10–12. Patent Owner argues that “[i]nclusion of presentation ID in play list is information instructing client device to send presentation ID to streaming system to cause media to be stream.” *Id.* Patent Owner also argues that “a reservation including the presentation ID is transmitted to the viewer which causes the viewer to communicate with a ‘stream caster 304’ to control it so ‘the media will be streamed to the media play [client].’” Sur-reply 7 (citing Ex. 2016, 20, 31; Ex. 2017, 10–11).

However, Patent Owner’s arguments are conclusory. These applications say nothing about the presentation ID being “information instructing the client device how to communicate” with the servers to cause the segments or advertisements to be streamed to the client device. Exs. 2016, 2017, 2020, 2021, 2023, 2024, 2025. These applications merely disclose providing a presentation ID in a play list or a reservation, but they are silent as to how the presentation ID itself instructs the client device how to communication with the streaming servers. *Id.* It is well settled that “[e]ntitlement to a filing date does not extend to subject matter which is not disclosed but would be obvious over what is expressly disclosed.” *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1571–72 (Fed. Cir. 1997). “It is not sufficient for purposes of the written description requirement of § 112 that the disclosure, when combined with the

knowledge in the art, would lead one to speculate as to modifications that the inventor might have envisioned, but failed to disclose.” *Id.* Nor does the claimed subject matter could have been “envisioned” from the earlier disclosure establish written description support. *Goeddel v. Sugano*, 617 F.3d 1350, 1356 (Fed. Cir. 2010).

Moreover, the presentation ID merely identifies the presentation. The ’360 patent makes clear that the presentation itself, not the presentation ID, “may include special instructions, such as special media sequencing instructions, late binding media instructions, and/or special routing instructions.” Ex. 1001, 9:52–55. Therefore, Patent Owner’s argument that the presentation ID provides support for the “instructing” claim elements is not supported by the ’993 application, the ’519 application, or the draft application, and it is also inconsistent with the ’360 patent.

In addition, Patent Owner advances several additional arguments in its Sur-reply. First, Patent Owner argues that Petitioner “does not otherwise dispute that the ’360 patent claims find written description support” in the ’993 application and the ’519 application, and that the Patent Owner’s Response established written description support in these applications. Sur-reply 6 n.3. Patent Owner’s arguments are unavailing. Patent Owner admits that these applications have the same disclosure as the draft application. PO Resp. 26 (citing Exs. 2020, 2021). Tellingly, Patent Owner proffers a Claim Chart mapping the claims at issue to only the draft application. Ex. 2017. As discussed above, all three applications fail to provide support for the “instructing” claim elements.

Second, Patent Owner argues that, because the '360 patent and all intervening applications incorporate the '519 application by reference, the showing of written description support in the '519 application applies to all applications in the chain. Sur-reply 6 n.3 (citing Exs. 2017, 2020, 2021). However, as discussed above, each of the '519 application, the '949 application, and the draft application fails to provide support for the “instructing” claim elements.

Finally, Patent Owner argues that Petitioner does not substantively dispute Patent Owner’s showing that the presentation ID supports the “instructing” claim elements. Sur-reply 8 (citing Reply 9). We do not agree with Patent Owner’s characterization of Petitioner’s Reply. Petitioner specifically argues that “[Patent Owner’s] attempted swear-behind also fails on substance because Ex-2016 does not provide the necessary description of the claimed ‘information instructing the client device,’ ‘content distribution network,’ and ‘advertising server.’” Reply 8. Petitioner also argues that Patent Owner’s Response “does not mention ‘presentation identification’ even once, highlighting why [Patent Owner’s] reliance on this exhibit is problematic.” *Id.* at 9.

For the foregoing reasons, we find that Patent Owner fails to show that claims 15, 16, 19, 21, and 27 of the '360 patent are entitled to a priority date earlier than January 18, 2002.

c. The '044 application

Patent Owner argues that the '044 application is based on a paper entitled “Operational Concept Description (OCD) For Media Routing

Algorithm” (“OCD Paper,” Ex. 2022) and dated January 17, 2001. PO Resp. 29; Exs. 2013–2015. However, Patent Owner does not provide any explanation as to how the ’044 application or the OCD Paper provides support for all of the elements in the challenged claims. PO Resp. 29–31. In its Sur-reply, Patent Owner also does not show how the ’044 application or the OCD Paper provides support for the claims at issue. Sur-reply 3–11. To the extent that Patent Owner argues that the presentation ID in the ’044 application provides support for the “instruction” claim elements, that argument also fails for the reasons discussed above regarding the ’993 application, the ’519 application, and the draft application. A presentation ID merely identifies the presentation. Ex. 1011, 19. The ’044 application is silent as to a presentation ID being used as information instructing the client device how to communicate with the servers to obtain the media and advertisements. Ex. 1011. As discussed above, the ’360 patent makes clear that the presentation itself, not the presentation ID, “may include special instructions, such as special media sequencing instructions, late binding media instructions, and/or special routing instructions.” Ex. 1001, 9:52–55.

For the foregoing reasons, we find that Patent Owner fails to show that the ’044 application provides adequate written description for the “instructing” claim elements.

d. Conclusion on priority date of the challenged claims

For the foregoing reasons, we find that claims 15, 16, 19, 21, and 27 are not entitled to the benefit of the filing dates of the ’993 application, the ’519 application, or the ’044 application, and the draft application does not

provide written description support for those claims. Those claims are not entitled to a priority date earlier than January 18, 2002. Thus, Madison qualifies as prior art against the challenged claims of the '360 patent.

3. Whether Madison and Wiser would have rendered the claims obvious

Petitioner provides detailed explanations to account for all of the claim limitations recited in claims 15, 16, 19, 21, and 27 and reasons to combine the teachings of Madison and Wiser. Pet. 45–68. In support of its arguments, Petitioner directs our attention to Dr. Houh’s Declaration. Ex. 1003. Patent Owner argues that Madison and Wiser fail to disclose certain claim limitations, and that Petitioner fails to articulate a sufficient reason to combine the prior art teachings, citing to the Declaration of Mr. Adams for support. PO Resp. 47–59, 64–66 (citing Ex. 2012). For the reasons stated below, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 15, 16, 19, 21, and 27 would have been obvious over Madison in view of Wiser. We do not find that Patent Owner’s arguments or Mr. Adams’s testimony refute Petitioner’s showing. Our analysis below focuses on the disputed claim elements.

4. Claims 15, 16, and 19

a. *“identifier uniquely associated with the client device and a viewing session” and “reservation identification” in a “file”*

Claim 15 recites “receiving from a client device . . . signaling to have video content streamed to the client device” and “generating an identifier uniquely associated with the client device and a viewing session for the video content and transmitting to the client device . . . and in one or more

files . . . the identifier.” Ex. 1001, 54:4–28. Claim 16 recites that “the identifier is a reservation identification.” *Id.* at 54:29–30.

Petitioner asserts that Madison in view of Wiser discloses these claim elements. Pet. 48–54, 63–64. Petitioner argues that, in response to a request for video content, Madison’s playlist server will execute the “makeplaylist.asp” program and dynamically generate a playlist redirector file. *Id.* (citing Ex. 1051 ¶¶ 3, 20, 26, 31, 105–108, Fig. 1). Petitioner explains that the redirector file comprises a list of URLs for each stream file, including the proper prefix, hostname, and stream filename. *Id.* (citing Ex. 1051 ¶¶ 109–110). Petitioner relies on Wiser’s media voucher to disclose a reservation and Wiser’s voucher ID to teach a unique “identifier” and a “reservation identification.” *Id.* (citing Ex. 1006, 4:57–59; referring back to its Ground 1 analysis for elements 15.b and 15.b.5 (Pet. 31–33, 39)).

Dr. Houh testifies that an ordinarily skilled artisan would have been motivated to combine the teachings of the playlist redirector file in Madison with Wiser’s voucher ID “to track and allocate finite system resources, such as the number of streams a delivery server is able to handle and to allow the delivery server to validate and authenticate the user requesting the media file.” Ex. 1003 ¶ 197 (citing Ex. 1006, 5:7–12, 14:65–15:18). Dr. Houh also testifies that “[s]ervers’ limited streaming capacity was a common media delivery problem, and well-known solutions existed before the ’360 Patent, including generating a reservation to ensure resource availability for streaming media to the user.” *Id.* ¶ 167. Dr. Houh further testifies that a relevant artisan would have understood Wiser’s voucher ID “to constitute a

uniquely generated number since if the ID was not unique, the server could not determine the proper correspondence between the voucher ID and the correct reservation and would be unable to deliver the proper media” to the user’s device. *Id.* ¶ 170. In addition, Dr. Houh testifies that such an artisan would have understood that the voucher ID is uniquely associated with the client device and a viewing session of the media as “voucher ID 302 limits the use of the media voucher 300 to a single purchase or preview transaction.” *Id.* ¶ 151 (citing Ex. 1006, 8:30–33, 15:23–28). We credit Dr. Houh’s testimony as it is consistent with prior art of record. And we agree with Petitioner and, for the reasons given, find that Madison in view of Wiser teaches the aforementioned elements of claims 15 and 16.

Patent Owner advances several arguments. First, Patent Owner argues that a redirector file is not an identifier, and that it is not unique because a redirector file for a type of media player can be used on any client device with that media player. PO Resp. 48. However, Patent Owner cannot show nonobviousness by attacking Madison individually where the ground of unpatentability here is based on the combination of Madison and Wiser. *Keller*, 642 F.2d at 426.

Second, Patent Owner argues that Wiser is directed to audio, not video content, and Wiser teaches away from video. PO Resp. 48–49. Patent Owner also argues that Wiser does not disclose a play-list or a voucher ID in a play-list. *Id.* at 54; Sur-reply 21.

We have rejected those arguments for the reasons discussed in Section II.E.1. Patent Owner also improperly attacks a reference individually again

where the ground of unpatentability here is based on the combination of Madison and Wiser. *Keller*, 642 F.2d at 426. As Petitioner notes, Madison discloses generating a playlist redirector file in response to a request for video media. Pet. 51–57; Ex. 1051 ¶¶ 3 (“The CM Database 118 further includes . . . an identification of whether the content is audio and or video.”), 25, 31, 70, 105, 106 (“An end user 104 desiring to listen to or view the web cast on their computer or other device can click on the URL.”), 107–111. Dr. Houh testifies that an ordinarily skilled artisan would have been motivated to combine the teachings of the playlist redirector file in Madison with Wiser’s voucher ID “to track and allocate finite system resources, such as the number of streams a delivery server is able to handle and to allow the delivery server to validate and authenticate the user requesting the media file.” Ex. 1003 ¶ 197 (citing Ex. 1006, 5:7–12, 14:65–15:18).

Third, Patent Owner argues that “Wiser *teaches away* from generating an identifier *uniquely* associated with a client device (i.e., a *single* client device),” because (1) “Wiser states that play back for a single transaction should not be limited to a single client device” and, (2) with regard to a preview transaction, a relevant artisan would have understood that any client device receiving the HTTP response could receive and use the media voucher data to play the requested media. PO Resp. 50. We have rejected these arguments for the reasons discussed above in Section II.E.1.

Fourth, Patent Owner argues that Wiser’s voucher ID is not a “reservation identification” because “the reservation of Wiser is only used to indicate that the media exists and is available for purchase.” PO Resp. 55.

We have rejected these arguments for the reasons discussed in Section II.E.1.

Finally, Patent Owner argues that Madison in view of Wiser does not disclose a “file” that includes the “unique identifier” or “reservation identification” and “four additional specific elements.” PO Resp. 55–56; Sur-reply 21. Patent Owner’s argument is unavailing. As discussed above and in Section II.F.5 below, Petitioner has provided a sufficient reason why a relevant artisan would have been motivated to use Wiser’s voucher ID in Madison’s playlist redirector file, and Petitioner has shown that Madison in view of Wiser discloses, in response to a request for video media or a signaling, generating a playlist redirector file (a “file”) that includes a voucher ID (“the identifier” or a “reservation identification”). Pet. 51–58, 63–64; Ex. 1003 ¶¶ 184–189, 193–197. As discussed in Section II.F.4.b below, Petitioner has shown that Madison’s playlist redirector file also contains “an indication of one or more segments of the video content.” Pet. 58. As discussed in Section II.F.4.c below, Petitioner has shown that Madison’s playlist redirector file further contains a URL to facilitate streaming of “the one or more segments” and “information instructing the client device” how to communicate with a resource and an advertiser server. *Id.* at 59–63.

For these reasons, we find that Petitioner has shown that Madison in view of Wiser discloses the aforementioned elements of claims 15 and 16.

b. “One or more segments of the video content”

Claim 15 recites “an indication of one or more segments of the video content.” Ex. 1001, 54:13–14. Petitioner asserts that Madison teaches this claim element. Petitioner explains that the user makes a request for content, such as a playlist (“signaling to have video content streamed to the client device” or a request for media), by clicking on the request URL. Pet. 55 (citing Ex. 1051 ¶¶ 106, 107; Ex. 1003 ¶ 192). Petitioner notes that, in response to the request, Madison’s playlist server dynamically generates a playlist redirector file, which comprises a list of URLs for each stream file, and that each URL identifies the stream filename. *Id.* at 56 (citing Ex. 1051 ¶¶ 108–110). Petitioner takes the position that the stream file names are “an indication of one or more segments of the video content.” *Id.* at 58 (citing Ex. 1051 ¶¶ 78, 109; Ex. 1003 ¶ 198). We agree with Petitioner and, for the reasons given, find that Madison teaches that element in claim 15.

Patent Owner argues that Madison’s file name “represents a *full* video, not a *segment* of a video,” and Madison does not disclose “streaming a *single* video in . . . a ‘plurality of *segments*’ (e.g., a segment of a movie).” PO Resp. 50–52 (citing Ex. 2012 ¶ 221); Sur-reply 21.

Patent Owner’s arguments improperly rest on the premise that the requested media must be a single full video (e.g., an entire movie). The ’360 patent makes clear that the requested media may be a single media item or multiple media items (e.g., a program with multiple media items) and that “[m]edia may include one or more *media clips or a part of a media clip*.” Ex. 1001, 4:64–65, 5:25–28, 19:60–62, 20:43–44 (emphasis added). The

Specification discloses that the “content owner may create a program having one or more media items” including “*a media clip for a movie and an advertisement,*” and that a “viewer may desire to receive one or more of the media identified in the program.” *Id.* (emphasis added). Hence, the requested media may include “a media clip for a movie” or a program having a plurality of media items, not necessarily a single piece of media or an entire movie as Patent Owner alleges. Interpreting the requested media to require a single entire media item or an entire movie is inconsistent with the Specification.

We also do not agree with Patent Owner’s argument that Madison’s file name “represents a *full* video, not a *segment* of a video,” and Madison does not disclose “streaming a *single* video in . . . a ‘plurality of *segments*’ (e.g., a segment of a movie).” PO Resp. 50–52. Patent Owner improperly assumes that each file referenced in Madison’s ASX redirector file is the entire requested video. The user in Madison is requesting a playlist that includes multiple stream files. Ex. 1051 ¶¶ 103, 106–110. Indeed, Mr. Adams admitted that “the end user selects . . . the playlist URL.” Ex. 1083, 106:18–23. Thus, the requested playlist is the requested “video content” and the stream files are the “segments of the video content.”

Madison also makes clear that advertisements may be inserted between portions of the requested media. Ex. 1051 ¶ 32 (“ad tag (which specified where an advertisement is to be inserted), start time (if the Stream is a portion of the file)”). Mr. Adams admitted that a relevant artisan would have understood how to use ASX files to transmit portions of a complete

media file (e.g., a half of a tv episode, followed by an advertisement, followed by the second half of a tv episode). Ex. 1081, 110:7–111:9. Indeed, Dr. Houh testifies that the Microsoft’s 1999 article “All About ASX Files” (Ex. 1017) exemplifies an ordinarily skilled artisan’s knowledge and the article teaches inserting advertising or special interest clips between portions of the media. Ex. 1003 ¶ 201 (citing Ex. 1017, 1, 4).

For the foregoing reasons, we find that Petitioner has shown that Madison discloses the “segments” element of claim 15.

c. URLs identifying resources, “information instructing the client device how to communicate with . . . resources” and “an advertising server”

Claim 15 requires, in one or more files, (1) a URL including an identification of resources, (2) “information instructing the client device how to communicate with the one or more resources” to cause the video segments to be streamed to the client device, and (3) “information instructing the client device how to communicate with an advertising server to cause one or more advertisements to be streamed” to the client device. Ex. 1001, 54:14–28. Claim 19 requires the “information instructing the client device how to communicate with the one or more resources . . . is based on one or more media rules.” *Id.* at 54:35–40.

Petitioner asserts that Madison in view of Wisser discloses these claim elements. Pet. 59–66. Petitioner contends that Madison’s redirector file includes a list of URLs, and that each URL includes an identification of the media server available to facilitate the streaming. *Id.* (citing Ex. 1051 ¶¶ 109–111). Petitioner also asserts that Madison’s playlist server generates

the redirector file in ASX format, and that a relevant artisan would have understood that ASX files include instructions for obtaining media from media servers and instructions for obtaining advertisements from advertising servers, as required by claim 15. *Id.* (citing Ex. 1051 ¶¶ 25, 32, 109–111, Fig. 2b; Ex. 1003 ¶¶ 201–206). Petitioner explains that a relevant artisan would have understood that ASX files include instructions to play files in a particular order or to dynamically insert other files such as advertisements, based on media specified in the content management database, as well as protocol information (“mms”), which specifies instruction executable by the user’s device. *Id.* (citing Ex. 1051 ¶¶ 25, 71, 109–111; Ex. 1017, 1, 6–12; Ex. 1003 ¶¶ 212–215). Petitioner avers that these instructions all act as rules for streaming the requested segments. *Id.*

Dr. Houh testifies that Microsoft’s 1999 article “All About ASX Files” (Ex. 1017) exemplifies such an artisan’s knowledge, and the article explains that, when a user’s device receives an ASX file, it launches Windows Media Player, which “looks in the ASX for instructions on where to get the ASF file, and then starts the stream playing.” Ex. 1003 ¶¶ 201–202 (quoting Ex. 1017, 1). Dr. Houh also testifies that such an artisan would have understood that Madison’s ASX redirector file includes instructions to play files in a particular order or to dynamically insert advertisements, because ASX playlists also include instructions “to schedule content to play in succession, or insert advertising or special interest clips into a stream.” *Id.* (quoting Ex. 1017, 4). Dr. Houh further testifies that a relevant artisan would have understood that inserting the advertisement

stream would cause Madison’s “makeplaylist” program to identify the location or DNS hostname of the media server carrying the advertisement, and insert the advertisement stream file name and location into the playlist, in the same manner as other streams. *Id.* ¶ 204.

We credit Dr. Houh’s testimony as it is consistent with the prior art of record. And we agree with Petitioner’s reasoning and find that for the reasons given, Madison in view of Wiser teaches the aforementioned elements of claims 15 and 19.

Patent Owner advances several arguments. First, Patent Owner argues that “All About ASX Files” is applied to meet the claim element, and that reference is not part of any asserted ground and should be disregarded. PO Resp. 52; Sur-reply 22.

Patent Owner’s arguments are unavailing. Petitioner relies on Dr. Houh’s testimony, which is corroborated by “All About ASX Files,” to establish that ASX files including instructions to obtain media were within the general knowledge of an ordinarily skilled artisan. Pet. 60–66; Ex. 1003 ¶¶ 199–202, 212–215; Ex. 1017, 1, 4, 6–12. Indeed, Mr. Adams admitted that an ordinarily skilled artisan would “naturally go to the Microsoft documentation,” including “All About ASX Files” while using ASX files. Ex. 1081, 97:11–98:4; Ex. 1017.

The Federal Circuit has explained “even though evidence such as expert testimony . . . [is] not themselves prior art references, [it is] permissible evidence in an *inter partes* review for establishing the background knowledge possessed by a person of ordinary skill in the art.”

Qualcomm Inc. v. Apple Inc., 24 F.4th 1367, 1376 (Fed. Cir. 2022).

“Regardless of the tribunal, the inquiry into whether any ‘differences’ between the invention and the prior art would have rendered the invention obvious to a skilled artisan necessarily depends on such artisan’s knowledge.” *Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330, 1337–38 (Fed. Cir. 2020) (rejecting an argument that, because the general knowledge of a skilled artisan does not constitute ‘prior art consisting of patents or printed publications’ under § 311(b), it cannot be used in an *inter partes* review to supply missing claim elements).

An obviousness “analysis requires an assessment of . . . the background knowledge possessed by a person having ordinary skill in the art.” *Dow Jones & Co. v. Abblaise Ltd.*, 606 F.3d 1338, 1349, 1353 (Fed. Cir. 2010) (quoting *KSR*, 550 U.S. at 401) (quotation marks omitted). “As *KSR* established, the knowledge of such an artisan is part of the store of public knowledge that must be consulted when considering whether a claimed invention would have been obvious.” *Randall Mfg. v. Rea*, 733 F.3d, 1355, 1362–63 (Fed. Cir. 2013). Therefore, we are required to consider references, like the “All About ASX Files” article, cited as “evidence of the background understanding of skilled artisans.” *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1365 (Fed. Cir. 2015) (holding that references “can legitimately serve to document the knowledge that skilled artisans would bring to bear in reading the prior art identified as producing obviousness” and vacating the Board’s decision because it appeared that the Board had declined to consider a reference simply because the reference

“had not been identified at the petition stage as one of the pieces of prior art defining a combination for obviousness”).

Second, Patent Owner argues that the instructions in the ASX files do not cause video segments to be streamed, and that “instructions pertaining *how* media is *presented* are not the same as instructions used to *obtain* media,” citing Dr. Houh’s cross-examination testimony for support. PO Resp. 53 (citing Ex. 2019, 290:12–291:8); Sur-reply 23.

Patent Owner’s arguments are unavailing. We agree with and credit Dr. Houh’s testimony that one of ordinary skill in the art would have recognized that Madison’s ASX redirector files include instructions for obtaining the media, such as media format, media sequence, and advertisement insertion. Ex. 1003 ¶¶ 201–206 (citing Ex. 1051 ¶¶ 25, 32, 109–111, Fig. 2b; Ex. 1017, 1, 4). As Dr. Houh testifies, “ASX files, like those taught in Madison, include many types of instructions for obtaining the media.” Ex. 1003 ¶ 201. Dr. Houh further testifies that “ASX playlists can include other types of instructions, including ‘allow[ing] you to schedule content to play in succession, or to insert advertising or special interest clips into a stream after a specific period of time or at a specific point,’” and that “[t]he ASX also includes protocol information, which specifies instructions executable by the end user, here ‘mms.’” *Id.* (citing Ex. 1017, 1, 4; Ex. 1005 ¶¶ 25, 109–111). Indeed, Mr. Adams admitted that sequencing instructions are related to how the media is obtained because “[i]t would be normal to obtain the portions or media clips in the order in which they’re going to be played.” Ex. 1081, 131:14–19.

Also, Patent Owner's reliance on Dr. Houh's cross-examination testimony is misplaced. Dr. Houh's cross-examination testimony was answering Patent Owner's questions regarding the '044 application's disclosure directed to the "instructions about how the player should present the media to the viewer," not Madison's instructions. Ex. 2019, 288:4–10. Thus, Dr. Houh's testimony does not support Patent Owner's arguments regarding Madison's instructions.

Third, Patent Owner argues that "URLs cannot be the claimed 'information instructing' because the claims require 'information instructing' in addition to the URL set forth in the claim" and "to be something *separate* from the URL." PO Resp. 53–54; Sur-reply 22–23.

However, Patent Owner's arguments improperly rest on the premise that instructions cannot be part of the URL's. As discussed above in Section II.E.3, the claims do not require the instructing information to be separate from the URLs. The '360 patent discloses that "there are many possible ways of formatting the URLs." Ex. 1011, 18. Indeed, the Specification also makes clear a URL may include other claim elements, such as the identification of the requested media and the reservation identification. Ex. 1001, 10:18–21, 26:19–21. Mr. Adams admitted that formatting the instructions "as part of the URL string doesn't actually . . . change[] anything . . . you're still transmitting the instructions," and that "[i]t's a formatting difference, quite frankly" and "[s]o I think actually both satisfy the claims in my opinion." Ex. 1081, 180:22–181:5. Moreover, when arguing that the January 13, 2001 draft application provides written

description support for the challenged claims, Patent Owner alleges that the presentation ID in a URL is the claimed “instruction.” Sur-reply 7; PO Resp. 26; Ex. 2017, 10; Ex. 1011, 18 (providing an example of a URL that provides the server type, reservation identification, server name, order identification, presentation identification, and media identification—“rtcp://servertype.reservationid.nrpname.net/orderid/presentationid/mediaid”).

Fourth, Patent Owner argues for the first time in its Sur-reply that Petitioner improperly relies “on the same ASX redirector file from Madison” to meet both “instructing” elements in claim 15. Sur-reply 22–23. Patent Owner’s argument is improper because no new arguments are permitted in a sur-reply. *See* 37 C.F.R. § 42.23(b); Consolidated Trial Practice Guide⁷ at 74; *see also* 84 Fed. Reg. 64,280 (Nov. 21, 2019).

In any event, Patent Owner’s argument is unavailing. Claim 15 recites “in one or more files.” Ex. 1001, 54:11. Therefore, the claim does not require more than one file to meet both “instructing” claim elements. Patent Owner also ignores Petitioner’s explanations and Dr. Houh’s testimony that the instructions for obtaining segments from the media server (e.g., the protocol in the segment URL or the sequence for streaming the segments) are for Element 15.b.3(iii) (Pet. 60–61; Ex. 1003 ¶¶ 201–202), and that the instructions for obtaining advertisements from an advertising server (e.g., the protocol in the advertisement URL or the sequence for

⁷ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

streaming the advertisements) are for Element 15.b.4(iv) (Pet. 61–63; Ex. 1003 ¶¶ 203–206).

Finally, Patent Owner argues that Petitioner fails to identify any “media rules,” as recited in claim 19, because claim 19 requires the information instructing the client device how to communicate with the server is based on “one or more media rules” and Petitioner merely points to the “instructions.” PO Resp. 56. Patent Owner’s argument is unavailing. The ’360 patent discloses that “media rules to determine the sequence in which the media clips are to be streamed [and] where the media clips are to be placed.” Ex. 1001, 10:37–40. Similarly, in Madison, playing the files in an order is the instruction for obtaining the segments, which is based on the rule that requires a particular order (e.g., play in succession). Pet. 64–66 (citing Ex. 1003 ¶¶ 212–215; Ex. 1051 ¶¶ 109–111). In addition, the protocol information is the instruction for obtaining the segments, which is based on the rules of the specific protocol “mms.” *Id.*

For the foregoing reasons, we find Petitioner has shown that Madison in view of Wiser teaches or suggests the “information” and “media rule” elements in claims 15 and 19.

5. Reasons to combine the teachings of Madison and Wiser

Petitioner avers that a relevant artisan would have been motivated to combine Madison’s teaching of a playlist redirector file with the voucher ID in Wiser “to track and allocate finite system resources, such as the number of streams a delivery server is able to handle and to allow the delivery server to validate and authenticate the user requesting the media file.” Pet. 51–54,

58, 64 (citing Ex. 1006, 5:7–12, 14:65–15:18); Ex. 1003 ¶¶ 184–189, 196–197, 209–211. Dr. Houh testifies that Wiser explains that generating and tracking reservations by the content server using a voucher ID is necessary because delivery servers may have a “limited number of active streams of data being delivered at any one time.” Ex. 1003 ¶ 187 (quoting Ex. 1006, 14:65–15:1). We find that Petitioner has articulated a sufficient reason to demonstrate that person of ordinary skill would have combined Madison and Wiser.

Patent Owner argues that Madison and Wiser disclose “fundamentally different systems” because “Madison is focused on sharing content between a community of content owners and users,” whereas “Wiser is specifically configured to restrict access to music to only those who have paid for the media” and “Wiser does not disclose the use of a play list.” PO Resp. 64–66 (citing Ex. 2012 ¶¶ 166–171). Patent Owner avers that an ordinarily skilled artisan would have understood that adding functionality from Wiser into Madison would fundamentally change the intent and design of Madison. *Id.*; Sur-reply 23–24. Patent Owner also argues that “Wiser’s voucher ID is not a reservation” for reserving resources for streaming content. Sur-reply 23.

Patent Owner’s arguments are unavailing. Patent Owner improperly attacks a reference individually where the ground of unpatentability here is based on the combination of Madison and Wiser. *Keller*, 642 F.2d at 426. As discussed above in Sections II.E.1 and II.F.4.a, Wiser is not limited to audio media, and a relevant artisan would not have ignored Wiser’s teachings regarding reservations and reservation identifications. We also

have rejected Patent Owner's arguments that the reservation in Wiser is not used to reserve system resources and that "Wiser does not disclose the use of a play list" for the reasons discussed above in Sections II.E.1 and II.F.4.a.

Moreover, "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference." *Keller*, 642 F.2d at 425. "Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *Id.*

Here, Dr. Houh testifies that methods of reserving resources were well-known in the art by the late 1990s and that a relevant artisan would have recognized that delivery server resources, such as memory and available bandwidth, were finite and needed to be managed to ensure timely delivery and quality of service of streaming media. Ex. 1003 ¶¶ 106, 188 (citing Ex. 1019, 202; Ex. 1023; Ex. 1024, 40). Patent Owner admits that the "use of reservations were generally known" at the time of the invention, and Mr. Adams admitted that the RSVP Specification (Ex. 1023) was "a very well-known document that talks about ways of improving the quality of an Internet connection over an IP network." PO Resp. 63; Ex. 1081, 62:17–25. The RSVP Specification is "a resource reservation setup protocol designed for an integrated services Internet," providing "receiver-initiated setup of resource reservations for multicast or unicast data flows, with good scaling and robustness properties." Ex. 1023, 1.

In addition, Wiser teaches that "each delivery server 118 is licensed and configured by the system provider to have a limited number of active

streams of data being delivered at any one time.” Ex. 1006, 14:66–15:1.

Dr. Houh testifies that a relevant artisan would have been motivated to modify Madison’s play-list redirector file to provide a voucher ID, as taught by Wiser, because “utilizing reservations for streaming media was already well-known and desirable to address finite memory and bandwidth for the delivery server.” Ex. 1003 ¶¶ 106, 188–189. “[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 550 U.S. at 418 (*quoting Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)). For the foregoing reasons, we find that Petitioner has articulated an adequate reason to combine the teachings of Madison and Wiser.

6. Claims 21 and 27

Petitioner has accounted for the limitations recited in each of the remaining dependent claims—claims 21 and 27. Pet. 66–68. Claim 21 recites “a unique identifier associated with (i) the one or more segments and (ii) rules for streaming the one or more segments.” Ex. 1001, 54:44–49. Petitioner asserts that Madison’s stream filename is associated with the stream file (a “segment”) and with “rules for streaming the segments” because “the end user’s media player pulls each identified stream from the media server 120 identified in the redirector file in the order in which it appears in the file.” Pet. 66–67 (citing Ex. 1051 ¶¶ 108–111; Ex. 1003 ¶¶ 216–218).

Patent Owner advances several arguments. First, Patent Owner argues that Madison does not disclose “one or more *segments* of *the* video content.” PO Resp. 57. We have rejected this argument for the reasons discussed above in Section II.F.4.b.

Second, Patent Owner argues that “[t]he ‘stream identifier/filename’ has nothing to do with the sequence/order of the play-list.” *Id.* According to Patent Owner, because “a ‘stream identifier/filename’ may appear in *many* different play-lists,” “the ‘stream identifier/filename’ is not a unique identifier of the sequence/order of the playlist.” *Id.*

Patent Owner’s arguments are unavailing. The ’360 patent itself indicates that the same segment may be in multiple programs or presentations. Ex. 1001, 51:7–11. In addition, as Petitioner explains, if each stream identifier/filename in Madison could be one episode of Seinfeld (e.g., “Seinfeld-S01-E01” for the first episode of the first season of the show), that stream identifier/filename uniquely identifies the episode and is associated with the episode (the claimed “segment”). Reply 25–26. It also is associated with a rule for streaming the segment, the order to stream the segment (e.g., the first episode of the first season comes first). *Id.*

Third, Patent Owner argues that “[t]he claims require the episode to be streamed in segments.” Sur-reply 25. However, Patent Owner incorrectly assumes that each file referenced in Madison’s playlist redirector file is the requested media. As discussed above in Section II.F.4.b, each file referenced in Madison’s playlist redirector file is a “segment” of the requested media, not the requested media. Ex. 1051 ¶¶ 103, 106–110.

Finally, Patent Owner argues that no teaching of Madison suggests that the stream identifier/filename dictates the sequence/order in which the streams are pulled, and that the streaming order depends on the order of the stream listing, which is also independent of the identifier/filename.

Sur-reply 24–25. Patent Owner’s arguments are unavailing. Madison expressly provides an example redirector file that include stream filenames associated with the sequence in which the files are streamed. Ex. 1051 ¶ 110. An example redirector file in Madison is reproduced below with highlights.

```
<ASX>
  <ENTRY>
    <REF HREF="mms://mediaserver.company.com/stream1.asf">
    <REF HREF="mms://mediaserver.company.com/stream2.asf">
    <REF HREF="mms://mediaserver.company.com/stream3.asf">
  </ENTRY>
</ASX>
```

The example redirector file shown above has three URLs with stream file names: “stream1.asf,” “stream2.asf,” and “stream3.asf” (all highlighted in blue). As shown in this example in Madison, the stream file names are associated with (1) the files (the claimed “segments”), and (2) “rules for streaming the one or more segments”—the order to stream the segments. Specifically, the “stream1.asf” file will be streamed first, the “stream2.asf” file will be streamed second, and the “stream3.asf” file will be streamed third. A relevant artisan would have recognized that these file names help the “makeplaylist program” and the CM database in Madison to sort and

retrieve the files in the order according to their file names when generating the playlist redirector file. Ex. 1051 ¶¶ 109–111.

For the foregoing reasons, we find Petitioner has shown that Madison in view of Wiser teaches the elements of claim 21.

As to claim 27 that recites “the one or more advertisements are dynamically generated for a presentation associated with the video content,” Petitioner asserts that Madison’s “makeplaylist” function access the Stream2 Table 214 when generating a redirector file, and the Stream2 Table includes a field for an “ad tag,” which “specifie[s] where an advertisement is to be inserted.” Pet. 67–68 (citing Ex. 1051 ¶ 32, Fig. 2b; Ex. 1003 ¶¶ 219–221).

Patent Owner advances several arguments. First, Patent Owner argues that Madison’s advertisements are not “dynamically generated” because “[d]ynamically’ generating advertisements refers to making a determination of an advertisement to insert into a video *at the time the video is being played.*” PO Resp. 46–47 (citing Ex. 1001, 11:20–12:64) (emphasis added). However, Patent Owner admits that the ’360 patent describes dynamically selecting advertising “at the time the play script is being built,” not necessarily “at the time the video is being played.” Sur-reply 25.

Mr. Adams also admitted that, in the context of the ’360 patent, “dynamically generating advertisements” refer to advertisements being inserted “*after the request has been received*, but not necessarily during the actual playback of the media.” Ex. 1083, 156:6–157:3 (emphasis added).

Second, Patent Owner argues that Petitioner cannot rely on other references that are not part of the ground. PO Resp. 58; Sur-reply 26.

Patent Owner’s argument is unavailing. Petitioner relies on Dr. Houh’s testimony, which is corroborated by other references to establish that ASX files were within the general knowledge of an ordinarily skilled artisan. Ex. 1003 ¶¶ 219–221. For example, Dr. Houh testifies that “it was well known to dynamically insert . . . URLs for advertisements in ASX files, ‘to customize the advertisements the user receives,’ by pointing ‘the URL for the advertisements to the URL of the Ad Server,” citing the “All About ASX Files” article for support. *Id.* ¶ 219 (citing Ex. 1017, 4). As we discussed above in Section II.F.4.c, we are required to consider such a reference cited as “evidence of the background understanding of skilled artisans.” *Ariosa*, 805 F.3d at 1365. An obviousness “analysis requires an assessment of . . . the background knowledge possessed by a person having ordinary skill in the art.” *Dow Jones*, 606 F.3d at 1349.

Finally, Patent Owner argues that a relevant artisan would not have understood that “an ad tag to teach or suggest to dynamic selection of ad content while a play-script is being created.” Sur-reply 25. However, as discussed above in Section II.F.4.a, Madison teaches that, in response to a request for media, its playlist server will “execute the ‘makeplaylist.asp’ program and dynamically generates a playlist redirector file,” comprising a list of URLs for each stream file. Ex. 1051 ¶¶ 108–111. Indeed, Mr. Adams admitted that after the user makes a request for media, Madison’s “system executes a ‘makeplaylist’ program to dynamic play and dynamically generate a playlist redirector file.” Ex. 1083, 106:18–24. Madison’s “makeplaylist” program accesses the Stream2 Table 214 when generating a

redirector file. Ex. 1051 ¶ 109. The Stream2 Table 214 includes a field for an “ad tags,” which “specifie[s] where an advertisement is to be inserted.” *Id.* ¶ 32. As discussed above, Dr. Houh testifies that “it was well known to dynamically insert . . . URLs for advertisements in ASX files, ‘to customize the advertisements the user receives,’ by pointing ‘the URL for the advertisements to the URL of the Ad Server,” citing the “All About ASX Files” article for support. Ex. 1003 ¶ 219 (citing Ex. 1017, 4). Therefore, we find that Petitioner has shown that Madison teaches or suggests generating advertisements dynamically for a presentation associated with the video content, as required by claim 27.

For the foregoing reasons, we find that Petitioner has shown that claims 21 and 27 would have been obvious over Madison and Wiser.

7. Conclusion on Obviousness over Madison and Wiser

For the foregoing reasons, we find that Petitioner has demonstrated by a preponderance of the evidence that claims 15, 16, 19, 21, and 27 are unpatentable under § 103(a) as obvious over Madison in view of Wiser.

III. CONCLUSION

For the foregoing reasons, we conclude that Petitioner has established by a preponderance of the evidence that claims 15–19, 21, 24, and 27 of the ’360 patent are unpatentable.

IV. ORDER⁸

For the foregoing reasons, it is

ORDERED that claims 15–19, 21, 24, and 27 of the '360 patent are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
15–19, 21, 24, 27	103(a)	Eyal, Wiser	15–19, 21, 24, 27	
15, 16, 19, 21, 27	103(a)	Madison, Wiser	15, 16, 19, 21, 27	
Overall Outcome			15–19, 21, 24, 27	

⁸ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

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